

FINAL
Socioeconomic Baseline Report
for the
Wyoming Greater Sage-Grouse Resource
Management Plan Amendments for the
BLM Casper, Kemmerer, Newcastle,
Pinedale, Rawlins, and Rock Springs
Field Offices
and the
Land and Resource Management
Plan Amendments for
National Forest System Lands
Administered by the
Medicine Bow and Bridger-Teton
National Forests and Thunder Basin
National Grassland



Wyoming State Office



September 2012

Mission Statement

It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

FINAL
Socioeconomic Baseline Report

for the

**Wyoming Greater Sage-Grouse
Resource Management Plan Amendments**

**for public lands administered by the
Bureau of Land Management**

**Casper, Kemmerer, Newcastle, Pinedale, Rawlins,
and Rock Springs Field Offices**

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for**

**National Forest System Lands
administered by the**

**Medicine Bow and Bridger-Teton National Forests and
Thunder Basin National Grassland**

September 2012

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ACRONYMS LIST

AMS	Analysis of the Management Situation
ATV	All-Terrain Vehicle
AUM	Animal Unit Month
BEA	Bureau of Economic Analysis
BLM	Bureau Land Management
BLS	Bureau of Labor Statistics
BTNF	Bridger-Teton National Forest
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EIS	Environmental Impact Statement
EJ	environmental justice
EO	Executive Order
FWS	U.S. Fish and Wildlife Service
FY	fiscal year
GDP	Gross Domestic Product
I-	Interstate Highway
IMPLAN	IMPact analysis for PLANning
JEDI	Jobs and Economic Development Impact
LQ	Location Quotient
LRMP	Land and Resource Management Plan
MBNF	Medicine Bow National Forest
MMS	U.S. Minerals Management Service
MW	Megawatt
NAICS	North American Industry Classification System
NASS	National Agricultural Statistics Service
ND	No Data Available
NEPA	National Environmental Policy Act
OHV	off-highway vehicle
ONRR	Office of Natural Resources Revenue
ORV	off-road vehicle
PILT	payment in lieu of taxes
PWMTF	Permanent Wyoming Mineral Trust Fund
REIS	Regional Economic Information System

RMP	Resource Management Plan
ROW	right-of-way
SIC	Standard Industrial Classification
TBNG	Thunder Basin National Grassland
USA	United States of America
USFS	U.S. Forest Service
WWF	World Wildlife Fund
WY	Wyoming

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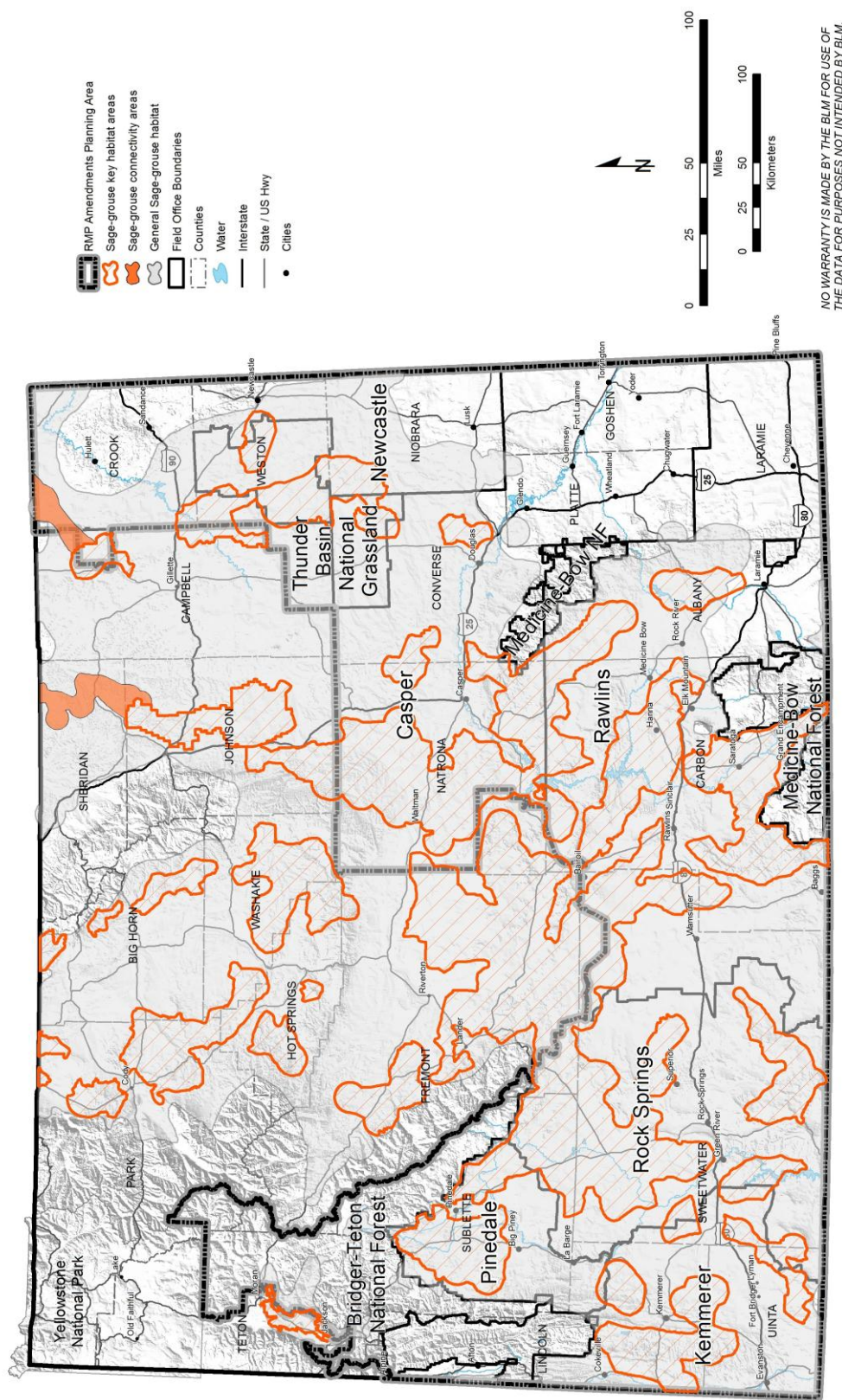
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CHAPTER 1—INTRODUCTION

This socioeconomic baseline report will assist in land use planning and development of the Bureau of Land Management (BLM) Programmatic Sage-Grouse Resource Management Plan (RMP) Amendment and Environmental Impact Statement (EIS) and an EIS for the U.S. Forest Service (USFS) Land and Resource Management Plan (LRMP) amendments associated with sage-grouse management. In this planning action, the BLM Wyoming State Office will prepare RMP amendments with an associated EIS for the Rawlins, Green River, Kemmerer, Pinedale, Casper, and Newcastle Field Office RMPs, and the USFS will prepare LRMP amendments with an associated EIS for the Medicine Bow National Forest (MBNF), Bridger-Teton National Forest (BTNF), and Thunder Basin National Grassland (TBNG) LRMPs. As part of the planning process, socioeconomic information will be used to analyze the potential impacts of management alternatives.

Figure 1-1 shows sage-grouse habitat across the state, including key, connectivity, and general habitat areas; it also identifies the extent of the planning area. The management actions under consideration for this planning effort will only address management of BLM- and USFS-administered lands within the habitat areas shown on this map that are within the planning area boundary. Management of non-BLM/USFS lands within the planning area, and management of sage-grouse habitat areas outside of the planning area, would not be changed. However, BLM and USFS management changes could have broader social and economic impacts, which will be addressed in the impacts analysis phase of the planning process.

Figure 1-1. Planning Area and Sage-Grouse Habitat Areas



Socioeconomics is not a BLM or USFS management decision; it is a contextual element for planning. This baseline report addresses social, cultural, and economic conditions and trends within the socioeconomic study area defined below. These conditions and trends will affect current and future uses of BLM and USFS public land resources. Conversely, decisions that BLM and the USFS make in the current planning process may have social, cultural, and economic impacts. These impacts may be viewed as positive or negative, depending on conditions and on the point of view of stakeholders to public lands. This report provides socioeconomic background information for the impact analysis to be conducted later in the planning process. This information can also help inform public discussion throughout the planning process.

Socioeconomic impacts from the sage-grouse management planning effort are most likely to be related to the following potential decisions:

- Restrictions on oil and gas leasing; on the leasing of coal, trona, and other solid leasable minerals; and potentially on access to mineral materials
- Restrictions on wind energy development
- Changes to grazing management
- Changes to recreation management; in particular, to some off-highway vehicle (OHV) open areas, limited areas, designated areas, or existing roads and trails.

Given the potential for impacts related to these types of decisions, this baseline report (particularly in the Public Land Uses and Values chapter) focuses on information relevant to minerals, renewable energy (particularly wind), grazing, and recreation/OHV use.

The report is divided into five chapters:

- **Introduction** – This chapter describes the context for development of this socioeconomic baseline report.
- **Overview of the Socioeconomic Study Area** – This chapter defines the geographic area covered and provides a high-level characterization of land ownership and current population.
- **Social and Cultural Conditions** – This chapter identifies and profiles socioeconomic study area population trends, demographics, and other social and cultural characteristics.
- **Economic Conditions** – This chapter characterizes the socioeconomic study area economy in terms of employment, earnings, sources of income, economic base, public finance, and economic indicators for the specific economic sectors most relevant to the current planning action.
- **Public Land Uses and Values** – This chapter examines relevant public land uses and describes some of the economic and social implications of those uses.

Within the social/cultural and economics chapters, most data is presented for each county within the socioeconomic study area. Wyoming and U.S. data are presented for comparison.

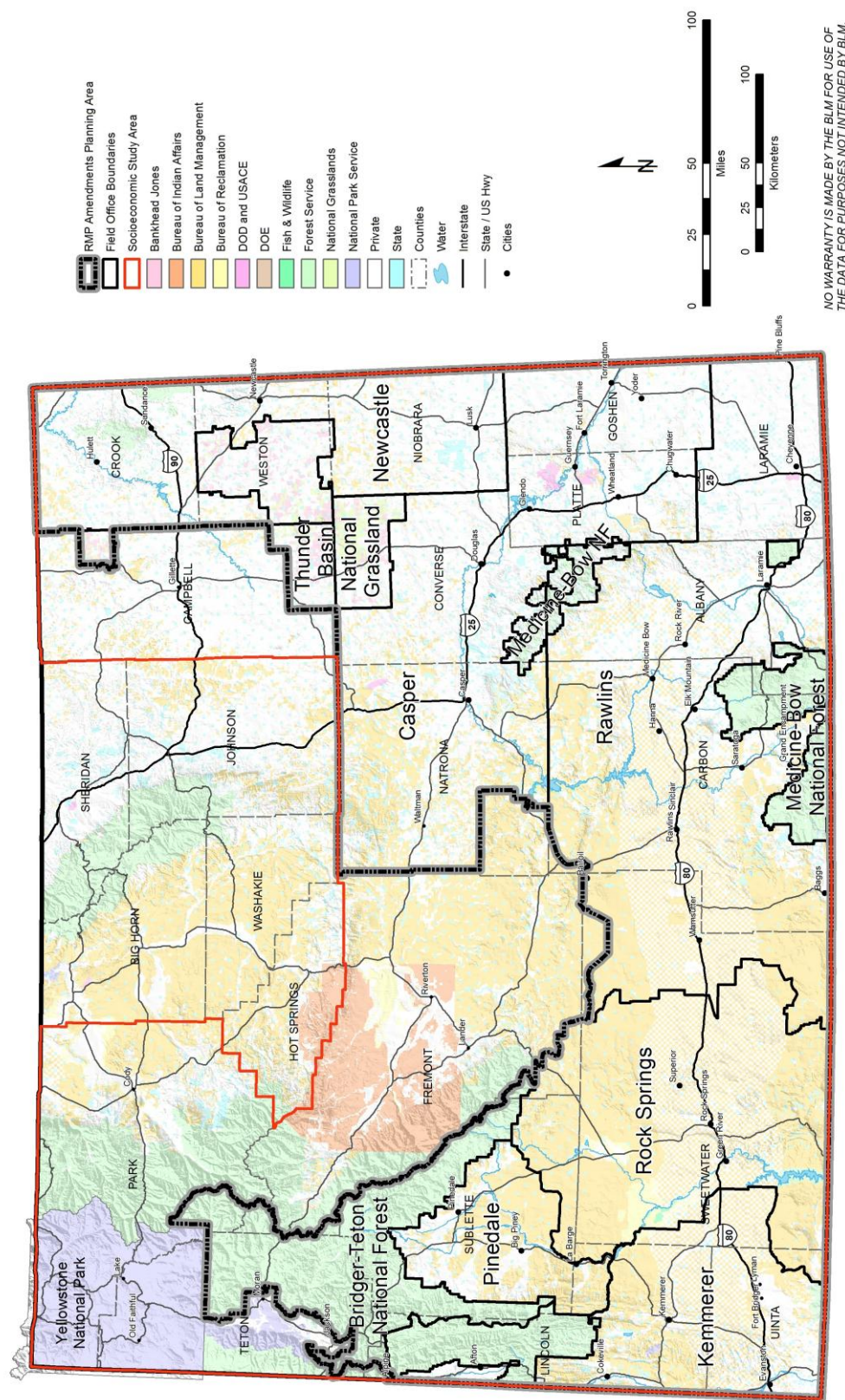
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CHAPTER 2—OVERVIEW OF THE SOCIOECONOMIC STUDY AREA

The BLM High Desert District Office encompasses the Rock Springs, Pinedale, Rawlins, and Kemmerer Field Offices; and the BLM High Plains District Office encompasses the Newcastle and Casper Field Offices. These six Field Offices are part of the sage-grouse planning action. Three USFS planning units are also included in the sage-grouse planning action: the BTNF, the MBNF, and the TBNG.

For planning purposes, the relevant geographic area is differentiated into a planning area, a decision area, and a socioeconomic study area, as described in the *BLM Land Use Planning Handbook* (H-1601-1) and discussed in the following paragraphs. Figure 2-1 shows the location of the planning area and the socioeconomic study area, along with land tenure (ownership) of surface land throughout Wyoming.

Figure 2-1. Socioeconomic Study Area, Planning Area, and Surface Land Tenure



The **planning area** encompasses much of the land area within Wyoming, covering all or most of the land area of 15 counties and small portions of Campbell, Fremont, and Park counties. It shares a border with Idaho to the west, Utah to the southwest, Colorado to the south, Nebraska and South Dakota to the east, and Montana to the north.

The **decision area** consists of those lands and resources within the planning area that BLM and the USFS administer. It includes all public lands and federal mineral estate that the six BLM Field Offices and three USFS planning units manage. The decision area spans approximately 16.3 million acres of BLM and USFS-managed public surface land and 23.2 million acres of federal mineral estate in Albany, Campbell, Carbon, Converse, Crook, Fremont, Goshen, Laramie, Lincoln, Natrona, Niobrara, Park, Platte, Sublette, Sweetwater, Teton, Uinta, and Weston counties. Of the surface land, BLM manages about 11.25 million acres, and the USFS manages just over 5 million acres. Federal mineral estate includes situations where the surface and subsurface are owned by the federal government, and situations where the subsurface mineral estate, or a portion thereof, is owned by the federal government and the surface is under nonfederal ownership. Hereafter, the terms “BLM-administered lands” or “USFS-administered lands” includes both surface land and mineral estate.

This baseline report is primarily focused on the **socioeconomic study area**, which is determined by the economic and social relationships between communities in the region and the surface land and subsurface mineral estate that BLM and the USFS manage. A socioeconomic study area commonly extends beyond the decision area and may extend beyond the planning area because the decisions agencies make can impact socioeconomic conditions in proximate lands and communities based on economic flows in the public and private sectors, how and where services and goods are obtained, and the cultural relationships of communities and resource users to BLM and USFS public lands. A socioeconomic study area may also be larger than the planning area in cases where key socioeconomic data is only available for geographies (e.g., counties) that extend beyond the planning area.

The socioeconomic study area for this planning action has been defined to include 18 counties within, or in proximity to, the boundaries of the following six Field Offices and three USFS planning units: Albany, Campbell, Carbon, Converse, Crook, Fremont, Goshen, Laramie, Lincoln, Natrona, Niobrara, Park, Platte, Sublette, Sweetwater, Teton, Uinta, and Weston counties. Most of Campbell, Fremont, and Park counties fall outside of the planning area but are included in the socioeconomic study area because they have significant population centers within reasonable proximity to the planning area (e.g., Cody, Gillette, Lander, Riverton). For this reason, there may be significant economic interactions between the planning area and these counties.

Table 2-1 shows land management in the socioeconomic study area by county. Of the total land in the 18-county socioeconomic study area, the majority is federally owned (49.7 percent). BLM manages 27.0 percent, the USFS manages 14.4 percent, and other federal agencies manage 8.3 percent. Private landowners hold the next largest amount of land (44.1 percent). State and local government own 5.7 percent of the land. Water covers 0.4 percent of the socioeconomic study area.

Table 2-1. Land Management in the Socioeconomic Study Area (Acres)

County	BLM	USFS	All Other Federal	State and Local	Private	Water	Total
Albany	296,290	372,006	4,378	220,736	1,840,117	21,969	2,755,495
Campbell	228,283	55,925	92,532	195,237	2,498,013	-	3,069,990
Carbon	2,057,757	625,663	35,090	325,053	2,011,649	37,878	5,093,090
Converse	130,091	177,439	74,529	255,791	2,082,294	5,845	2,725,989
Crook	90,604	169,528	15,717	127,960	1,426,508	5,384	1,835,702

County	BLM	USFS	All Other Federal	State and Local	Private	Water	Total
Fremont	2,100,766	981,163	1,450,982	250,981	1,097,316	41,028	5,922,236
Goshen	25,172	-	1,014	88,016	1,309,548	3,331	1,427,080
Laramie	9,856	-	6,029	155,626	1,547,298	304	1,719,114
Lincoln	982,896	895,063	22,955	107,809	594,110	11,007	2,613,840
Natrona	1,502,981	5,514	23,949	394,256	1,493,397	15,712	3,435,808
Niobrara	123,998	332	488	164,368	1,390,191	-	1,679,378
Park	629,692	1,710,082	1,180,712	159,594	769,127	6,694	4,455,900
Platte	82,493	1,670	10,700	136,339	1,100,776	17,533	1,349,511
Sublette	1,266,318	1,162,159	4,518	112,269	601,398	8,016	3,154,679
Sweetwater	4,393,151	54,875	213,961	186,742	1,827,618	32,834	6,709,181
Teton	3,440	1,371,737	1,154,188	4,332	135,587	29,676	2,698,959
Uinta	479,923	37,439	-	54,068	762,477	1,509	1,335,415
Weston	71,246	76,392	163,245	114,235	1,108,843	-	1,533,962
Study Area	14,474,959	7,696,987	4,454,988	3,053,412	23,596,266	238,720	53,515,331
% of Study Area	27.0%	14.4%	8.3%	5.7%	44.1%	0.4%	100.0%

Note: The study area totals above include counties that are in the socioeconomic study area but are not in the planning area. Thus the total acreage for BLM and USFS is greater than the decision area, which encompasses the approximately 16.3 million acres of BLM and USFS-managed public surface land within the planning area only.

Source: BLM geographic information systems data, 2011.

Land use in the socioeconomic study area is split among various private, state, local, and federal landowners. Private land uses include urban and smaller rural communities, ranch land, and other private land uses scattered across the socioeconomic study area. State and local government land uses include several state and county parks, airports, and other public amenities. The major components of federal land use in the study area are as follows:

- **BLM:** Pinedale, Kemmerer, Rock Springs, Newcastle, Casper, and Rawlins Field Offices (within the planning area) and the Buffalo, Cody, and Lander Field Offices (outside the planning area but within the socioeconomic study area)
- **USFS:** BTNF, Shoshone National Forest, MBNF, and TBNG
- **Bureau of Reclamation:** Pick-Sloan Missouri Basin Program, North Platte Project, Kendrick Project
- **Bankhead Jones:** Land conservation and utilization
- **U.S. Fish & Wildlife Service (FWS):** Pathfinder National Wildlife Refuge, Bamforth National Wildlife Refuge, Hutton Lake National Wildlife Refuge, Mortenson Lake National Wildlife Refuge, Seeskadee National Wildlife Refuge, and Cokeville Meadows National Wildlife Refuge.

Spanning over 53 million acres, the socioeconomic study area represents nearly 86 percent of the total land area of Wyoming (just over 62 million acres), as shown in Table 2-2. The total population of the socioeconomic study area was estimated to be just under 501,000 in 2010, representing 88.7 percent of Wyoming's population. Laramie County and Natrona County were the most populous counties with 91,738 and 75,450 people, respectively. The socioeconomic study area has few urban areas; it is predominantly rural and sparsely populated. In 2010, the overall density of the socioeconomic study area

averaged 6.0 people per square mile. Laramie County was the most densely populated at 34.2 people per square mile, and Niobrara County was the least densely populated at 0.9 persons per square mile. Wyoming as a whole is sparsely populated at 5.8 people per square mile, and 12 of the counties in the socioeconomic study area are less densely populated than the state. Laramie County, the most densely populated county in the socioeconomic study area, is far more densely populated than the state, but much less densely populated than the nation. Table 2-2 details population, land area, and population density information for 2010.

Table 2-2. Population, Area, and Population Density, 2010

Area	Total Population (2010)	Land Area (Acres)	Land Area, 2010 (Square Miles)	Persons per Square Mile
Albany	36,299	2,755,495	4,305	8.4
Campbell	46,133	3,069,990	4,797	9.6
Carbon	15,885	5,093,090	7,958	2.0
Converse	13,833	2,725,989	4,259	3.2
Crook	7,083	1,835,702	2,868	2.5
Fremont	40,123	5,922,236	9,253	4.3
Goshen	13,249	1,427,080	2,230	5.9
Laramie	91,738	1,719,114	2,686	34.2
Lincoln	18,106	2,613,840	4,084	4.4
Natrona	75,450	3,435,808	5,368	14.1
Niobrara	2,484	1,679,378	2,624	0.9
Park	28,205	4,455,900	6,962	4.1
Platte	8,667	1,349,511	2,109	4.1
Sublette	10,247	3,154,679	4,929	2.1
Sweetwater	43,806	6,709,181	10,483	4.2
Teton	21,294	2,698,959	4,217	5.0
Uinta	21,118	1,335,415	2,087	10.1
Weston	7,208	1,533,962	2,397	3.0
Study Area	500,928	53,515,331	83,618	6.0
Wyoming	564,460	62,139,610	97,093	5.8
United States	308,745,538	2,260,419,475	3,531,905	87.4

Source: 2010 population data – U.S. Census Bureau 2010 data QT-P3; Land area acreage – Table 1 above, except Wyoming and U.S. land area in square miles are from U.S. Census Bureau, State & County QuickFacts (<http://quickfacts.census.gov/qfd/index.html>; accessed September 2012); All other figures – Calculated.

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CHAPTER 3—SOCIAL AND CULTURAL CONDITIONS

3.1 COMMUNITIES

The following sections describe each of the counties in the socioeconomic study area. Land areas are based on Table 2-1 and refer to surface land only, unless federal mineral estate is specifically mentioned.

3.1.1 Albany County

Albany County was organized December 16, 1868. Albany County covers 4,305 square miles in southeastern Wyoming and is home to a 2010 population of 36,299. BLM manages 463 square miles of Albany County, and the USFS manages 581 square miles.

Laramie, the county seat, is the largest city in Albany County, with a 2010 estimated population of nearly 31,000. It is home to the University of Wyoming. Interstate Highway 80 (I-80) bisects the southern half of Albany County, running east to west, and the I-25 corridor, running north to south, is located about 20 miles to the east in Laramie County. Colorado lies directly south of Albany County.

Albany County boasts numerous opportunities for year-round outdoor recreational activities and provides access to Bamforth National Wildlife Refuge, Hutton Lake National Wildlife Refuge, MBNF, and Mortenson Lake National Wildlife Refuge.

With the presence of the state university, Albany County employment is dominated by government and government enterprises and retail trade. Albany County also has the youngest and most educated population in the socioeconomic study area with a median age of 26.8 and 48.8 percent of the population with a postsecondary education.

3.1.2 Campbell County

Campbell County was organized in 1911 and spans 4,797 square miles of territory in northeastern Wyoming. BLM administers 357 square miles of the county, and the USFS administers 87 square miles.

With a population of 46,133, Campbell County is the third most populous county in Wyoming. The county seat is located in Gillette, by far the most populous community in the county with an estimated population of just over 26,000. I-90 bisects the county, running east and west. Montana lies directly to the north.

Campbell County touts itself as the energy capital of the nation. Thirty percent of the nation's coal is produced in area surface mines. The oil and gas development and production industry is also an important contributor to America's economy and Campbell County's prosperity. Mining accounts for 26 percent of Campbell County's employment. Ranching is another important land use; herds of cattle and sheep graze among large herds of deer and antelope. Every fall, the abundance of wildlife in attracts hunters from around the world.

Campbell County was recently listed in a popular agricultural magazine as one of the top 100 places to live in rural America. The population is growing rapidly due to coal mining and oil and gas development. The unemployment rate is low and job opportunities are high. Median family income in Campbell County is among the highest in the state.

3.1.3 Carbon County

Carbon County was organized in 1868 and spans 7,958 square miles in south-central Wyoming. BLM administers 3,215 square miles (40 percent) and the USFS administers 978 square miles of the county.

Carbon County has a population of nearly 16,000 and a population density of 2.0 persons per square mile, making it a predominantly rural area. Rawlins, with a population of 9,259, is the county seat and the most populous community. I-80 bisects Carbon County, running east and west. The county shares its southern border with Colorado.

Rawlins is significant as the original commercial heart of Carbon County. As one of hundreds of railroad towns along the Union Pacific mainline, Rawlins grew into a modern city with a diversified economy that today serves a regional ranching, oil and gas, and industrial community. Because of its location on the first transcontinental railroad and its status as a permanent water source in an otherwise semiarid region, Rawlins became a major division point for the Union Pacific Railroad. In the 20th century, the city was located on the first transcontinental auto highway, the Lincoln Highway. As such, it has played a key role in state, regional, and national transportation. Today, the main industry in Rawlins is oil and gas development and production, with several pipelines in the Rawlins area. Rawlins is also the home of the Wyoming State Penitentiary, a major employer in the area located just a few miles south of town. Wind energy development is another important industry in Rawlins and the county.

Located just 6 miles to the east is the small Wyoming community of Sinclair, home of the Sinclair Refinery, which boasts itself as “The West’s Most Modern Refinery.” First known as Parco, Sinclair was described by the *Rocky Mountain News* in August 1925 as “truly an oasis in an otherwise drab desert territory.” Carbon County also provides year-round access to the MBNF and Pathfinder National Wildlife Refuge, providing ample opportunities for outdoor enthusiasts. The abundance of wildlife in the county attracts hunters from around the world.

3.1.4 Converse County

Converse County was established in 1888, the same year Douglas was named as the county seat. Early explorers traveled west along the North Platte River, followed by pioneers traveling routes later identified as the Mormon and Oregon trails. Homesteaders began settling in the late 1800s and by the early 1900s, the area was producing oil and gas. Agriculture and energy production continue today as the primary economic engines in Converse County.

I-25 bisects the southern half of Converse County as it traverses east to west between Casper and Douglas before turning south toward Cheyenne. In Douglas, Highway 59 begins at I-25 and travels north through the TBNG and on into Campbell County and Gillette, Wyoming. The MBNF extends into southern Converse County south of I-25.

The North Platte River flows west to east through Converse County, and the North Platte watershed drains the southern half of this county. The Cheyenne watershed drains most of the northern half of Converse County. Energy development in Converse County, which primarily involved oil, gas, uranium, and coal, began in the early 1900s and continues today.

Converse County comprises 4,259 square miles, of which BLM administers 203 square miles and the USFS administers 277 square miles.

3.1.5 Crook County

Crook County was established in 1875. Covering 2,868 square miles of territory in the northeastern corner of Wyoming, Crook County is among the least populous counties in the state at 7,083 people in

2010. Crook County is a sparsely populated, rural community that shares its eastern border with South Dakota and its northern border with Montana. I-90 runs through Crook County east to west. Government, agriculture, and construction are the primary employers in Crook County.

Crook County offers access to a variety of outdoor activities, including those on the Black Hills National Forest, Devils Tower National Monument, and TBNG. The largest town in Crook County is Sundance, the county seat, with a population of about 1,500. BLM manages 142 square miles in the county, and the USFS manages 277 square miles.

3.1.6 Fremont County

Fremont County was established in 1884. Covering 9,253 square miles of the western portion of Wyoming, with a population of 40,123, Fremont County is among the largest and most populous counties in the socioeconomic study area. The county seat is Lander, with a population of about 7,500, which is second only to Riverton with a population of just over 10,600. Highway 287 and Highway 26 are the major roadways through Fremont County, which has no interstate highways.

Fremont County's unique geography offers access to a diversity of minerals, including uranium, oil and gas, jade, gold, and precious gems. Economically, government and retail trade account for the largest percentage of employment in Fremont County. A substantial portion of the Wind River Indian Reservation, including the tribal headquarters, is located within the Fremont county boundaries. In addition, the only casino in Wyoming (operated by the Tribes) is located in Fremont County.

Fremont County offers a wide range of rural resources and uses, including National Historic Trails, the Continental Divide National Scenic Trail, historic mining areas, rock climbing, hiking, mountain biking, hang gliding, livestock grazing, and wild horses. The abundance of wildlife in the county attracts hunters from around the world. Fremont County also offers access to Bridger National Forest, Shoshone National Forest, and Teton National Forest, making it a popular destination for outdoor enthusiasts. BLM manages 3,282 square miles of the county, and the USFS manages 1,533 square miles.

3.1.7 Goshen County

Goshen County was established in 1911, the same year Torrington was named as the county seat. Beginning in 1843, the area became a gateway for early explorers and pioneers traveling west via the North Platte River and the Oregon and Mormon trails. Agriculture became a primary economic activity early in Goshen County's history and remains so today. Energy development and transportation are also important economic sectors currently.

Highway 26 parallels the North Platte River traversing west to east between Guernsey and Torrington. Highway 85 intersects Highway 26 and is the primary north-south transportation corridor in the county. Goshen County comprises 2,230 square miles, of which BLM administers 39 square miles. The USFS does not manage any land in Goshen County.

3.1.8 Laramie County

Laramie County's most populous community, Cheyenne, began in 1867, when the Union Pacific Railroad came through on its way to the west coast. The town site was first surveyed by General Grenville Dodge and was named for an Indian tribe that roamed the area. Settlement came so fast to the area that the nickname "Magic City of the Plains" was adopted for Cheyenne. On August 8, 1867, the first charter for the government of the City of Cheyenne was established. At that time, Cheyenne was situated in the Dakota Territory and had a population of approximately 600 people. The following December, a permanent city charter was granted by the Dakota Territory legislature.

Cheyenne, the largest city in the county with a recent population of over 59,000, is strategically situated at a major transportation hub (the intersection of Interstates 25 and 80 and two major railroads) and is a developing center of commerce. Only 90 minutes north of Denver, Colorado, Cheyenne sits as the northern anchor city of the Front Range of the Rocky Mountains. Cheyenne is the capital of Wyoming, the seat of Laramie County, and the site of F.E. Warren Air Force Base. Its economic base is extremely diverse, ranging from state and national government to high-technology industry, such as satellite communications.

Laramie County comprises 2,686 square miles, of which BLM administers 15 square miles. The USFS does not manage any land in Goshen County.

3.1.9 Lincoln County

Lincoln County was established in 1911, the same year Kemmerer was named as the county seat. Pioneers traveling west in the mid-to-late 1800s generally followed the Oregon Trail, which ran near Kemmerer. Early settlers established homesteads in the area in the late 1800s, and large sheep and cattle ranches took advantage of the vast rangeland. Extensive ranch settlement in the region followed the construction of the Union Pacific Railroad around 1867. Coal deposits at Kemmerer brought about its settlement in 1881. Kemmerer now boasts the largest open pit coal mine in the world.

State Highways 30 and 189 are the main roads through Lincoln County, and both connect Kemmerer with I-80 to the south in Uinta County. State Highway 30 bisects the southern portion of the county as it generally traverses east-west, passing through Kemmerer. State Highway 89, in the northern portion of the county, runs through the towns of Afton and Alpine.

Three important rivers pass through Lincoln County: the Bear River, the Snake River, and the Green River. The Bear River flows into the Great Salt Lake. The Snake River, which originates in Yellowstone National Park, crosses the northern tip of the county and joins the Columbia River before flowing into the Pacific Ocean. The Green River, which passes the eastern border of the county, flows southward into Utah, where it joins the Colorado River. Fontenelle Reservoir, created on the Green River system, is located in Lincoln County and is primarily surrounded by Bureau of Reclamation lands. Lincoln County comprises 4,084 square miles, of which BLM administers 1,536 square miles and the USFS administers 1,399 square miles.

3.1.10 Natrona County

Natrona County was established in 1888, the same year Casper was named as the county seat. Pioneers traveling west in the mid-to-late 1800s generally followed the Mormon and Oregon trails. Early settlers established homesteads in the area in the late 1800s, and large ranches of sheep and cattle took advantage of the vast rangeland. The Salt Creek and other early oil fields established the energy industry in this part of the planning area. Today, energy and agriculture remain important to the county's economy. In addition, Casper's role as a regional services and trade center, including health care and finance, also supports the county's economy.

Highway 26 generally bisects the middle of Natrona County as it traverses east to west between Casper and Waltman. I-25 is the primary north-south transportation corridor between Casper and Buffalo (in Johnson County). Southern routes from Casper include Highway 220 to Alcova and Highway 487. Approximately 8 square miles of the MBNF are in southeast Natrona County.

The North Platte River runs through Natrona County, and the county includes Alcova Reservoir and a portion of Pathfinder Reservoir. Alcova Reservoir is important to the Casper-Alcova Irrigation District, which supplies water to most of the irrigated land in Natrona County. Energy development in Natrona

County began in 1883 with the first oil well and continues today, primarily involving oil, gas, and uranium.

Natrona County comprises 5,368 square miles, of which BLM administers 2,348 square miles (44 percent). The USFS administers 9 square miles of the county.

3.1.11 Niobrara County

Niobrara County was established in 1911. It is the least populated and most rural county within the socioeconomic study area, with a population of 2,484 and a population density of less than one person per square mile. Niobrara County encompasses 2,624 square miles of eastern Wyoming and shares a border with both South Dakota and Nebraska. BLM manages 194 square miles, and the USFS manages 1 square mile.

Lusk, the county seat and largest town in Niobrara County, is located at the crossroads of U.S. Highways 85 and 20/26. The economy of the region is diverse; agriculture has long anchored the community business structure, but it has often been supplemented by booms in mineral exploration. The Union Pacific Railroad runs west to east through Niobrara County, carrying Wyoming's coal to the Midwest and beyond. Lusk is also home to the Wyoming Women's Center, Wyoming's state correctional facility for women. Outdoor enthusiasts find ample opportunities in Niobrara County for hunting, horseback riding, fishing, boating, hiking, rock/fossil/artifact hunting, tennis, sightseeing and swimming.

3.1.12 Park County

Park County was established in 1909 and organized in 1911. It was named for Yellowstone National Park, the first national park. The majority of the national park is located within Park County. Most of the Shoshone National Forest, the first national forest, is also located in Park County.

Park County encompasses 6,962 square miles of land, the majority of which is state or federal land, with only 17 percent privately owned. BLM manages 984 square miles, whereas the USFS manages 2,672 square miles (38 percent). Its population of 28,205 represents a population density of 4.1 persons per square mile. Cody is the largest community at 9,520 and is the county seat. It was founded in 1896 by Colonel William F. "Buffalo Bill" Cody.

The major industries of Park County are government, service industries, retail trade, and construction. Tourism related to Yellowstone National Park and the legacy of both Buffalo Bill and the cowboy history of the West are major foundations of the local economy. The town of Meeteetse, for example, is maintained as example of a frontier town complete with board sidewalks and other features of yesteryear. Outdoor recreation in the national park and the substantial areas of designated wilderness in the county are important economically, as is agriculture. The abundance of wildlife in the county attracts hunters from around the world.

3.1.13 Platte County

Platte County was established in 1911, the same year Wheatland was named as the county seat. Although pioneers traveled west along the Oregon Trail, which ran through what is now Platte County, the area was occupied primarily by Native Americans and fur trappers until the late 1860s, when cattle ranchers moved into the area. Agriculture remains an important economic activity in Platte County.

Platte County is bisected by I-25 as it traverses north-south between Glendo and Chugwater. Between Glendo and Wheatland, Highway 26 travels east to Guernsey and on to Torrington in Goshen County. The North Platte River runs through northeast Platte County and includes the Glendo and Guernsey

reservoirs. Mining plays a relatively minor role in Platte County's economy; however, the Laramie River Station power plant is a consumer-owned coal power plant that contributes to the area's economy.

Platte County comprises 2,109 square miles, of which BLM administers 129 square miles. In addition, BLM administers 660 square miles of federal mineral estate in Platte County. The USFS administers 3 square miles in the county.

3.1.14 Sublette County

Sublette County was established in 1921, the same year Pinedale was named as the county seat. Sublette County comprises 4,929 square miles, of which BLM manages 1,979 square miles and the USFS manages 1,816 square miles.

Located at the foot of the Wind River Mountain Range and close to the Bridger Wilderness, Pinedale is the county seat and the largest community in Sublette County with a population of about 2,000. The first inhabitants of the area were Shoshone, Gros Ventre, Bannock, Sheepeater, and Crow Native American tribes. White explorers, mainly trappers and mountain men, arrived in the early 1800s, drawn to the area by the tales of streams rich with beaver. Later, ranchers and cattlemen began to winter their stock in the area and eventually settled there themselves.

Ranching has historically been an important industry for the area. The tourism industry has played a large part in the economic development of Pinedale, with recreation opportunities that include fishing or boating in the many lakes surrounding Pinedale, snowmobiling in the surrounding mountain ranges, skiing at White Pine Ski Area, hiking in the Wind River Mountains, and wildlife viewing. The abundance of wildlife in the county attracts hunters from around the world. In the last few years, the level of oil and gas development has considerably increased, making it the dominant industry, with timbering and ranching declining in the area.

3.1.15 Sweetwater County

Sweetwater County was established in 1867, the same year Green River was named as the county seat. Several emigrant trails passed through the county, including the Oregon, California, Mormon, Overland, and Cherokee trails. In addition, the transcontinental railroad came in 1868, creating two major population centers—Green River and Rock Springs. Agriculture remains an important economic activity in Sweetwater County, as does mining for mineral commodities, such as coal, trona, oil, and gas. The largest deposit of trona in the world, according to the U.S. Geological Survey (2011), is largely located in Sweetwater County. Trona mining and soda ash processing is a unique and important industry for Sweetwater County.

I-80 traverses east-west through Sweetwater County. State Highway 30 traverses northwest from I-80 near Granger to Kemmerer (Lincoln County). The Upper Green River watershed, which drains all of Sweetwater County, is an important portion of the planning area. The Seedskaadee National Wildlife Refuge is located in Sweetwater County and is primarily surrounded by Bureau of Reclamation lands. The Flaming Gorge National Recreation Area is a key recreation and tourism resource in the county.

Sweetwater County comprises 10,483 square miles. BLM administers 65 percent of the county, which constitutes 6,864 square miles. The USFS administers 86 square miles.

3.1.16 Teton County

Teton County, Wyoming, is named for the Teton Range, the most prominent feature in the area. In 1921, it was part of Lincoln County, whose county seat was Kemmerer, which was too far away. In 1923, Teton

County was created despite the fact that it did not meet the population and property valuations requirements. Instead, it was created by a special act.

Today, the spectacular beauty of the Teton Range and the area surrounding Jackson attract thousands of visitors annually, who come for skiing, climbing, hiking, fishing, hunting, and many other outdoor activities in Grand Teton National Park and throughout the county. The county's economy is primarily based on this tourism and the expenditures of wealthy individuals and families who have established homes or vacation residences in the area.

The county seat of Teton County is Jackson. The county has a population of 21,294. It comprises 4,217 square miles. The USFS manages 2,143 square miles (51 percent). BLM manages 5 square miles in the county.

3.1.17 Uinta County

Uinta County was established in 1869, the same year Evanston was named as the county seat. For early explorers traveling west along the Oregon Trail, Fort Bridger, the oldest settlement in the county, was an important trading post located in a valley on the Blacks Fork River and is still in existence today. Agriculture and energy production are the primary economic activities in Uinta County.

I-80 generally traverses east-west through Uinta County. State Highway 189 traverses north from I-80 between Evanston and Lyman toward Kemmerer (Lincoln County).

The Upper Bear River watershed drains the western portion of Uinta County. The Upper Green River watershed drains the central and eastern portions of the county. Uinta County comprises 2,087 square miles, of which BLM administers 750 square miles and the USFS administers 58 square miles.

3.1.18 Weston County

Weston County was established in 1890. It covers 2,397 square miles of territory in northeastern Wyoming. BLM administers 111 square miles, and the USFS manages 119 square miles.

Weston County has a population of 7,208. Newcastle, with a population of roughly 3,500, is the county seat. Newcastle is located at the junction of Highway 16 and Highway 85, on the southwest edge of the Black Hills.

The dominant industries in the area are bentonite mining, oil and gas development, ranching, tourism, recreation, and government. Weston County offers numerous opportunities for outdoor recreation, including hunting, fishing, camping, backpacking, biking, boating, hiking, ice fishing, cross-country skiing, snowmobiling on over 335 miles of groomed snowmobile trails, wildlife viewing, and rockhounding. Keyhole Reservoir (about 54 miles north on Highway 16); Pactola Reservoir, Deerfield Reservoir, and Sheridan Lake (all approximately 50 miles into South Dakota); and Angastora Reservoir (approximately 100 miles southeast in South Dakota) provide fishing and boating opportunities. Weston County is rich in history, scenic beauty, and abundant wildlife with several loop tours that offer distinctive opportunities for sightseeing.

3.2 POPULATION GROWTH

According to the U.S. Census Bureau, the 2010 population of the socioeconomic study area was estimated to be 500,928. As shown in Table 2-2, the most populous county is Laramie County, with a population of 91,738, followed by Natrona County, with a population of 75,450. These populations amount to 18.3 percent and 15.1 percent of the socioeconomic study area population, respectively. Niobrara County has the lowest population at 2,484, or 0.5 percent of the socioeconomic study area.

Other counties with populations under 10,000 (and thus under 2.0 percent of the socioeconomic study area) are Crook, Platte, and Weston counties.

Table 3-1 shows how the population of the socioeconomic study area has increased since the 1970s as has the population of Wyoming and the United States. Every county within the socioeconomic study area saw positive population growth between 1970 and 2010, with the exception of Niobrara County, the smallest county by population in the socioeconomic study area. Seven counties saw population growth of over 100 percent: Campbell, Converse, Lincoln, Sublette, Sweetwater, Teton, and Uinta counties. In terms of absolute growth, the largest increases were in Laramie County (increase of 35,378 persons), Campbell County (33,176), Sweetwater County (25,415), and Natrona County (24,186). Growth in Campbell and Sweetwater counties is explained by increased mineral development (coal, oil, and gas, predominantly). Natrona County's growth also reflects some oil and gas development, as well as growth associated with the economy of Casper, the second-largest city in Wyoming. Laramie County's growth is largely associated with the economy of Cheyenne, Wyoming's largest city and state capital. Teton County's growth is based on the development of Jackson and surrounding areas as a popular resort.

Population growth projections between 2010 and 2020, prepared by the state government, anticipate continued growth of 10.7 percent for the socioeconomic study area as a whole. At the county level, Campbell (23.3 percent) and Sublette (35.5 percent) counties are projected to have the highest percentage population growth. Again, these counties have high levels of ongoing oil and gas development. In the same period, four other counties are projected to have greater than 10 percent population growth (Converse, Crook, and Fremont counties). Twelve counties are projected to have less than 10 percent population growth.

Table 3-1. Population of the Socioeconomic Study Area, 1970 to 2020

Area	1970	1980	1990	2000	2010	Change 1970–2010		2020	Projected Change 2010–2020	
						Persons	%		Persons	%
Albany	26,431	29,062	30,797	32,014	36,299	9,868	37.3	38,910	2,611	7.2
Campbell	12,957	24,367	29,370	33,698	46,133	33,176	256.0	56,890	10,757	23.3
Carbon	13,354	21,896	16,659	15,639	15,885	2,531	19.0	16,380	495	3.1
Converse	5,938	14,069	11,128	12,052	13,833	7,895	133.0	15,950	2,117	15.3
Crook	4,535	5,308	5,294	5,887	7,083	2,548	56.2	8,040	957	13.5
Fremont	28,352	38,992	33,662	35,804	40,123	11,771	41.5	44,360	4,237	10.6
Goshen	10,885	12,040	12,373	12,538	13,249	2,364	21.7	13,960	711	5.4
Laramie	56,360	68,649	73,142	81,607	91,738	35,378	62.8	99,710	7,972	8.7
Lincoln	8,640	12,177	12,625	14,573	18,106	9,466	109.6	19,170	1,064	5.9
Natrona	51,264	71,856	61,226	66,533	75,450	24,186	47.2	82,490	7,040	9.3
Niobrara	2,924	2,924	2,499	2,407	2,484	-440	-15.0	2,660	176	7.1
Park	17,752	21,639	23,178	25,786	28,205	10,453	58.9	30,440	2,235	7.9
Platte	6,486	11,975	8,145	8,807	8,667	2,181	33.6	8,780	113	1.3
Sublette	3,755	4,548	4,843	5,920	10,247	6,492	172.9	13,880	3,633	35.5
Sweetwater	18,391	41,723	38,823	37,613	43,806	25,415	138.2	49,280	5,474	12.5
Teton	4,823	9,355	11,172	18,251	21,294	16,471	341.5	23,360	2,066	9.7
Uinta	7,100	13,021	18,705	19,742	21,118	14,018	197.4	22,580	1,462	6.9
Weston	6,307	7,106	6,518	6,644	7,208	901	14.3	7,900	692	9.6
Study Area	286,254	410,707	400,159	435,515	500,928	214,674	75.0	554,740	53,812	10.7
Wyoming	332,416	469,557	453,588	493,782	563,626	231,210	69.6	622,360	58,734	10.4
U.S.	205,052,174	227,224,681	248,709,873	281,421,906	308,745,538	103,693,364	50.6	341,387,000	32,641,462	10.6

Source: U.S.: 1970 – U.S. Census Bureau 1970; 1980 – U.S. Census Bureau 1980; 1990 – U.S. Census Bureau 1990; 2000 – U.S. Census Bureau 2000; 2010 population data – U.S. Census Bureau 2010 data QT-P3; 2020 projection – U.S. Census Bureau 2008 National Population Projections (current recommended series for data users; <http://www.census.gov/population/www/projections/2009projections.html>). Wyoming and Counties: Wyoming Economic Analysis Division 2008a, 2008b.

3.3 DEMOGRAPHICS

A comparison of several demographic characteristics of the 18 socioeconomic study area counties, Wyoming, and the United States is shown in Table 3-2. The figures depict various elements of the socioeconomic makeup of the socioeconomic study area.

Table 3-2. Demographics Overview of Socioeconomic Study Area Compared to State and Nation

County	Sex		Age (Years)		Avg. Family Size	Education (Degrees)		Language Other than English*
	Male	Female	Median	Over 65		Secondary	Post-Secondary	
Albany	52.1%	47.9%	26.8	8.7%	2.84	94.0%	48.8%	10.7%
Campbell	50.2%	49.8%	31.9	5.7%	3.11	90.4%	16.9%	5.3%
Carbon	53.8%	46.2%	48.9	12.9%	2.91	89.8%	18.4%	9.5%
Converse	50.7%	49.3%	39.0	12.8%	2.93	92.6%	17.0%	3.6%
Crook	51.5%	48.5%	43.6	16.2%	2.90	91.4%	18.1%	2.9%
Fremont	49.9%	50.1%	38.5	14.5%	3.07	88.9%	22.2%	8.3%
Goshen	52.1%	47.9%	43.6	18.9%	2.82	88.3%	19.9%	5.4%
Laramie	50.0%	50.0%	37.0	12.5%	2.95	90.5%	22.7%	8.1%
Lincoln	51.4%	48.6%	37.4	12.4%	3.11	91.2%	17.4%	4.2%
Natrona	50.3%	49.7%	36.8	12.4%	2.94	92.0%	21.5%	4.4%
Niobrara	46.7%	53.3%	46.1	21.0%	2.71	92.0%	18.8%	1.8%
Park	49.7%	50.3%	43.6	17.5%	2.81	92.1%	25.7%	4.3%
Platte	49.6%	51.4%	47.5	20.7%	2.76	88.3%	17.0%	4.8%
Sublette	54.2%	45.8%	38.3	10.1%	2.99	94.1%	26.2%	2.7%
Sweetwater	52.3%	47.7%	32.8	8.3%	3.09	89.5%	16.9%	7.7%
Teton	52.6%	47.4%	36.9	9.9%	3.32	95.9%	49.5%	13.2%
Uinta	50.5%	49.5%	33.9	8.9%	3.19	89.9%	17.3%	4.7%
Weston	52.6%	47.4%	42.3	15.9%	2.81	90.0%	19.3%	2.6%
Wyoming	51.0%	49.0%	36.8	12.4%	2.96	91.1%	23.2%	6.4%
United States	49.2%	50.7%	37.2	13.0%	3.14	84.6%	27.5%	19.6%

*Language other than English spoken at home.

Source: Sex, Age, Avg. Family Size – U.S. Census Bureau, Census 2010, Summary File 1, Tables: QT-P11, QT-P1; Education, Language Other than English – U.S. Census Bureau 2009a (2005-2009 American Community Survey).

As shown in Table 3-2, the male to female ratio is similar for all geographies, with slightly more males than females in both Wyoming and the socioeconomic study area. The exceptions are Fremont, Niobrara, Park, and Platte counties, which have slightly more females than males.

The median age for counties within the socioeconomic study area varies from 26.8 to 48.9 years of age. These figures compare to the state median age of 36.8 years and the national median age of 37.2 years. The two counties with the lowest median age are Albany County, with a median age of 24.5, and Campbell County, with a median age of 31.7 years of age. Albany County's lower median age can be attributed to the population of students at the University of Wyoming in Laramie. Campbell County's lower median age is a result of the high concentration of mining jobs in the area, which require a younger workforce. Carbon County has the oldest median age at 48.9 years of age.

The percentage of the population over 65 years can be grouped into three categories: low, average, and high. The categories are determined in relation to the national (12.4 percent) and state (13.0 percent) average of populations over 65 years of age. Albany, Campbell, Sublette, Sweetwater, Teton, and Uinta counties have a lower percentage of 65 and older residents than the nation and state, ranging from 5.7 percent to 10.1 percent. These counties with a low percentage of persons over 65 have a university population (Albany County), a strong mining industry that attracts younger workers, or a dominant resort economy (Teton County). Carbon, Converse, Fremont, Laramie, Lincoln, and Natrona counties generally reflect the national and state average, ranging from 12.4 to 14.5 percent. Crook, Goshen, Niobrara, Park, Platte, and Weston counties each have an over 65 population that is higher than the national and state average, ranging from 15.9 to 21.0 percent. Except Park County, these counties are all on the plains on the eastern edge of the state and lack larger communities (compared to Laramie County with Cheyenne). This factor may result in outmigration of younger persons from these counties, which would increase the percentage of older people.

Wyoming in general has a lower average family size than the United States (2.96 persons per family compared to 3.14 for the United States). Among the counties in the socioeconomic study area, the family size range is as low as 2.71 in Niobrara County and as high as 3.32 in Teton County. Generally speaking, low average family size—for example, as in Goshen (2.82), Niobrara (2.71), Platte (2.76), and Park and Weston (2.81) counties—correlates with high percentage of residents over 65. The exception is Albany County, whose low average family size is a result of its population of college students. Carbon (2.91), Converse (2.93), Crook (2.90), Fremont (3.07), Laramie (2.95), Lincoln (3.11), Natrona (2.94), and Sweetwater (3.09) counties are all relatively consistent with the statewide average (2.96) with respect to family size, but they are still below the national average (3.14).

Wyoming has a higher rate of high school graduates than the nation (91.1 percent compared to 84.6 percent), but a lower rate of college graduates at 23.2 percent compared with 27.5 percent nationally. With the exception of Albany (94 percent), Teton (95.9 percent), and Sublette (94.1 percent) counties, the rest of the socioeconomic study area is consistent with the statewide percentage of high school graduates. Albany County's high school graduation rate probably can be attributed to the presence of the university, while Sublette County's rate may be attributable to a higher than normal median family income. Teton County's rate is probably due to the very affluent population attracted by its resort economy. Wyoming's lower college graduation rate could be due in part to the high concentration of mining and construction jobs in Wyoming, which can provide a good income without a college degree.

Wyoming has a much lower percentage of residents who speak a language other than English at home than the nation (6.4 percent compared to 19.6 percent), and the majority of the counties in the socioeconomic study area are even lower than the statewide percentage. This pattern is consistent with the predominantly white racial demographics of the state (see discussion of Table 3-4). Albany and Teton counties' high rates correspond with their high percentages of residents who are foreign born (see Table 3-3).

Table 3-3 shows that the percentage of Wyoming residents born in Wyoming (42.0 percent) is lower than the percentage of people in the United States for whom their birth state is also their state of residence (59.0 percent). This statistic indicates strong migration into the area by persons born outside of Wyoming. This strong migratory draw is consistent with the effects of strong mining and construction industries, low unemployment in recent years, and affordable housing. These factors generally lure residents from other states. Teton (69.2 percent), Crook (66.2 percent), Uinta (63.0 percent), Park (62.5 percent), and Weston (62.0 percent) counties have the highest percentages of residents born in another state. Fremont (46.9 percent), Natrona (48.2 percent), Park (35.1 percent) and Platte (48.8 percent) counties have low percentages of residents born in another state, but all are well above the national average of 27.3 percent. Wyoming has a very low percentage of foreign born residents compared to the United States (3.5 percent versus 13.7 percent). Teton County (9.0 percent), Albany County (6.0 percent) and Sweetwater County

(5.2 percent) have the highest percentage of foreign born residents in the socioeconomic study area, but are still well below the U.S. average.

Table 3-3. Place of Birth of Socioeconomic Study Area Population

	State of Residence	Different State	Foreign born
	%	%	%
Albany	40.8	53.2	6.0
Campbell	40.5	56.8	2.7
Carbon	40.9	55.1	4.0
Converse	47.0	51.8	1.2
Crook	32.8	66.2	1.0
Fremont	51.3	46.9	1.8
Goshen	42.3	56.1	1.6
Laramie	38.7	56.7	4.6
Lincoln	41.7	54.7	3.7
Natrona	49.3	48.2	2.5
Niobrara	41.7	57.9	0.4
Park	35.1	62.5	1.8
Platte	48.9	48.8	2.2
Sublette	37.6	60.1	2.3
Sweetwater	42.9	52.0	5.2
Teton	20.6	69.2	9.0
Uinta	33.6	63.0	3.3
Weston	36.6	62.0	1.4
Wyoming	42.0	54.5	3.5
United States	59.0	27.3	13.7

Source: U.S. Census Bureau 2009a (2005–2009 American Community Survey).

The vast majority of the statewide population (90.7 percent) is of white race. As shown in Table 3-4, the socioeconomic study area's county populations are similar to the statewide populations, with Crook County having the highest percentage of whites (97.2 percent) and Fremont County having the lowest percentage (74.3 percent). The minority population throughout the socioeconomic study area is very low. Hispanics make up the largest minority population for all but one county: Fremont County has a relatively large population of American Indian/Alaska Native (21.2 percent), due to the Wind River Indian Reservation. The largest Hispanic population (16.8 percent) is in Carbon County, which is higher than the state figure (8.9 percent) and closer to the national figure (13.5 percent) than the rest of the socioeconomic study area. Teton County also has a high Hispanic population (15.0 percent). Further analysis of minority populations is provided in the Environmental Justice section (see section 3.8).

Table 3-4. Population by Race/Ethnicity in the Socioeconomic Study Area, 2010

Area	Race							Hispanic
	White	Black/ African American	American Indian/ Alaska Native	Asian	Native Hawaiian/ Pacific Islander	Some Other Race	Two or More Races	
Albany	90.1%	1.2%	0.7%	2.8%	0.1%	2.4%	2.7%	8.8%

Area	Race							Hispanic
County	White	Black/ African American	American Indian/ Alaska Native	Asian	Native Hawaiian/ Pacific Islander	Some Other Race	Two or More Races	
Campbell	93.2%	0.3%	1.2%	0.6%	0.0%	2.7%	2.1%	7.8%
Carbon	88.8%	0.7%	1.0%	0.7%	0.1%	6.5%	2.2%	16.8%
Converse	95.1%	0.3%	0.8%	0.3%	0.1%	1.7%	1.7%	6.3%
Crook	97.2%	0.2%	0.7%	0.2%	0.0%	0.6%	1.2%	2.0%
Fremont	74.3%	0.3%	21.2%	0.4%	0.0%	1.0%	2.8%	5.6%
Goshen	94.5%	0.6%	0.8%	0.3%	0.1%	2.4%	1.2%	9.7%
Laramie	88.5%	2.5%	1.0%	1.1%	0.2%	3.8%	3.1%	13.1%
Lincoln	95.4%	0.2%	0.8%	0.3%	0.0%	2.0%	1.2%	4.3%
Natrona	92.8%	0.9%	1.0%	0.7%	0.1%	2.2%	2.4%	6.9%
Niobrara	96.5%	0.2%	0.8%	0.4%	0.0%	0.5%	1.6%	2.1%
Park	95.6%	0.2%	0.6%	0.6%	0.1%	1.4%	1.6%	4.8%
Platte	95.4%	0.3%	0.4%	0.4%	0.1%	2.0%	1.5%	6.7%
Sublette	93.2%	0.3%	0.8%	0.5%	0.0%	3.7%	1.4%	6.9%
Sweetwater	88.5%	1.0%	1.0%	0.8%	0.1%	6.4%	2.3%	15.3%
Teton	88.4%	0.2%	0.5%	1.1%	0.1%	8.1%	1.6%	15.0%
Uinta	92.4%	0.3%	0.8%	0.3%	0.2%	4.1%	2.0%	8.8%
Weston	95.5%	0.3%	1.3%	0.3%	0.0%	0.9%	1.7%	3.0%
Wyoming	90.7%	0.8%	2.4%	0.8%	0.1%	3.0%	2.2%	8.9%
United States	72.4%	12.6%	0.9%	4.8%	0.2%	6.2%	2.9%	16.3%

Source: U.S. Census Bureau, 2010 Census Summary File 1, Table QT-P3.

Note: Hispanic population is an additional designation, not a race designation; the Hispanic population includes multiple races.

According to the U.S. Census Bureau 2005–2009 American Community Survey 5-Year Estimates (U.S. Census Bureau 2009a), the median family income and per capita income for Wyoming is high relative to the United States (\$63,545 median family income for Wyoming versus \$51,425 for the nation), as shown in Table 3-5. Within the socioeconomic study area, median incomes range from a low in Platte County of \$51,556 to a high in Teton County of \$90,326. Eleven of the counties within the socioeconomic study area (Albany, Campbell, Carbon, Converse, Laramie, Lincoln, Natrona, Sublette, Sweetwater, Teton, and Uinta counties) have median family incomes above \$60,000. Most of these counties have significant mining industries that provide strong wages. Albany and Laramie counties do not have as much mining, but do have strong professional occupational presence in the University of Wyoming and the City of Cheyenne, respectively. Teton County has a highly affluent resort economy. The remaining six counties (Crook, Fremont, Goshen, Niobrara, Platte, and Weston counties) all have a median family income above the national average, but lower than the statewide average.

Table 3-5. Income Levels in the Socioeconomic Study Area

Area	Median Family Income	Per Capita Income (2008)	Individuals Below Poverty Level (%)
Albany	\$67,657	\$35,993	21.4%
Campbell	\$82,626	\$50,332	6.0%
Carbon	\$60,349	\$42,772	9.6%

Area	Median Family Income	Per Capita Income (2008)	Individuals Below Poverty Level (%)
Converse	\$66,494	\$44,458	6.8%
Crook	\$51,778	\$44,269	10.1%
Fremont	\$54,040	\$37,431	14.1%
Goshen	\$52,617	\$35,412	12.8%
Laramie	\$62,200	\$44,613	9.5%
Lincoln	\$63,619	\$39,236	6.9%
Natrona	\$62,869	\$52,185	9.6%
Niobrara	\$58,000	\$41,066	10.7%
Platte	\$51,556	\$39,418	11.0%
Park	\$55,264	\$25,178	7.8%
Sublette	\$83,587	\$66,122	3.4%
Sweetwater	\$74,615	\$50,015	7.4%
Teton	\$90,326	\$38,588	7.7%
Uinta	\$64,668	\$44,580	10.4%
Weston	\$57,452	\$43,239	7.3%
Wyoming	\$63,545	\$48,580	9.6%
United States	\$51,425	\$40,166	13.5%

Source: Median Family Income, Individuals Below Poverty Level – U.S. Census Bureau 2009a (2005-2009 American Community Survey); Per Capita Income – BEA 2008, Table CA 1-3.

Table 3-5 also shows that statewide, the percentage of individuals below the poverty level (9.6 percent) is low compared the nation (13.5 percent). Albany County is the clear exception, with 21.4 percent of its population below the poverty level. This percentage may be due largely to the high population of college students who are not yet earning a significant income. At 14.1 percent, Fremont County's percentage of population below the poverty level is also higher than the nation's. Fremont County has a large American Indian population, a population that historically has a high rate of poverty. Fremont County also has a low percentage of employment from mining. The lowest level of poverty is in Sublette County (3.4 percent), which also has the second highest median income in the socioeconomic study area as a result of its mining industry. Additional detail on income is provided in the —Economic Conditions chapter, and poverty is discussed further in the Environmental Justice section (see section 3.8).

3.4 HOUSING

Table 3-6 provides U.S. Census Bureau (2005–2009) data showing that housing types in Wyoming are similar to the national figures, with the exception of mobile homes, which account for a much larger percentage of homes than in the nation as a whole. Niobrara County (80.4 percent) has the highest percentage of single-family detached homes in the socioeconomic study area, while Albany (50.6 percent) and Campbell (47.6 percent) counties have the lowest percentages. The Wyoming average is 66.3 percent, and the national average is 61.4 percent.

Table 3-6. Housing Unit Types, Tenure, and Change 2000–2010

County	Types		Tenure		Change 2000–2010		
	Single Unit Detached (2005–2009)	Mobile Home (2005–2009)	Owner-occupied (2010)	Vacant (2010)	Total Housing Units (2000)	Total Housing Units (2010)	Total Housing Units Net Change (2000–2010)
	(%)	(%)	(%)	(%)	N	N	N
Albany	50.6	11.2	49.9	12.5	15,215	17,939	2,724
Campbell	47.6	26.3	73.3	9.4	13,288	18,955	5,667
Carbon	74.7	11.5	71.3	25.5	8,307	8,576	269
Converse	65.8	17.6	72.0	11.4	5,669	6,403	734
Crook	69.9	27.3	79.3	18.7	2,935	3,595	660
Fremont	70.5	18.0	71.2	13.2	15,541	17,796	2,255
Goshen	79.1	11.9	70.4	11.1	5,881	5,972	91
Laramie	62.4	10.9	68.0	7.1	34,213	40,462	6,249
Lincoln	78.8	12.0	78.9	23.3	6,831	8,946	2,115
Natrona	70.6	10.9	70.3	9.4	29,882	33,807	3,925
Niobrara	80.4	11.3	72.0	20.1	1,338	1,338	0
Park	71.3	15.0	69.4	9.7	11,869	13,562	1,693
Platte	67.7	22.5	75.5	17.8	4,528	4,667	139
Sublette	78.8	17.2	68.0	32.3	3,552	5,770	2,218
Sweetwater	58.5	23.8	72.1	12.1	15,921	18,735	2,814
Teton	61.3	3.3	58.7	36.1	10,267	12,813	2,546
Uinta	60.7	17.2	75.1	12.0	8,011	8,713	702
Weston	68.7	23.1%	77.8	14.5	3,231	3,533	302
Wyoming	66.3	13.4	69.2	13.4	223,854	261,868	38,014
United States	61.4	6.6	65.1	11.4	115,904,641	131,704,730	15,800,089

Source: Housing unit types from U.S. Census Bureau 2009a (2005–2009 American Community Survey); percentage owner-occupied and percentage vacant from U.S. Census Bureau, Census 2010, Summary File 1, Tables DP-1 and DP-04; numbers of housing units from U.S. Census Bureau, Census 2010, Table DP-1 and U.S. Census Bureau, Census 2000, Table H001.

Table 3-6 also shows that Campbell (26.3 percent), Crook (27.3 percent), Platte (22.5 percent), Sweetwater (23.8 percent), and Weston (23.1 percent) counties have high percentages of mobile homes compared to the state (13.4 percent) and the nation (6.6 percent). In most of these cases, this relatively high percentage of mobile homes is reflective of the fact that locally burgeoning construction and mining industries have new and/or transient workers who reside in mobile homes and other rapidly available or temporary housing.

Albany County has the lowest percentage of owner-occupied homes (49.9 percent), and Teton County's percentage is also low (58.7 percent), whereas the rest of the socioeconomic study area is fairly consistent with state (69.2 percent) and national (65.1 percent) rates. Albany County's low rate is reflective of the higher population of college students who tend to rent rather than own. Teton County's rate reflects a strong rental market consistent with a resort economy and the presence of many second homes that are not usually occupied by their owners. The percentage of vacant homes is highest in Teton (36.1 percent), Sublette (32.3 percent), Carbon (25.5 percent), Lincoln (23.3 percent), Niobrara (20.1 percent) counties.

Total numbers of housing units, and net change between 2000 and 2010, are shown in Table 3-6. The largest net increases in total housing units are in Laramie County (an increase of 6,249 units, largely due to the economy of Cheyenne), and in Campbell County (an increase of 5,667 units, which is largely driven by the booming mineral development and production industry).

Table 3-7 shows the average sales prices of single-family homes for all Wyoming counties from 2004 to 2010. Note that the statewide average figures are somewhat skewed upward by the very high values in Teton County (\$1,975,000), due to the affluence of the Jackson area. Within the socioeconomic study area in 2010, the next highest sales values were in Sublette and Lincoln counties (\$258,000 and \$247,000, respectively). The high value in Lincoln County probably reflects the proximity of parts of the county to Jackson. The high value in Sublette County may reflect this same factor, as well as the bidding up of housing values due to the recent oil and gas boom in that county. The lowest 2010 sales values in the socioeconomic study area were in Crook, Goshen, Niobrara, and Platte counties (ranging from \$101,000 to \$141,000). All of these counties are very sparsely populated and located on the plains on the eastern side of the state. All study area counties saw significant increases in values from 2004 to 2008 (ranging from 26.7 percent in Albany County to 99.3 percent in Weston County and 269.2 percent in Teton County), followed by considerable volatility in average values from 2008 to 2009 and 2009 to 2010.

Table 3-7. Single-Family Housing Unit Sales Prices in Wyoming, 2004–2010

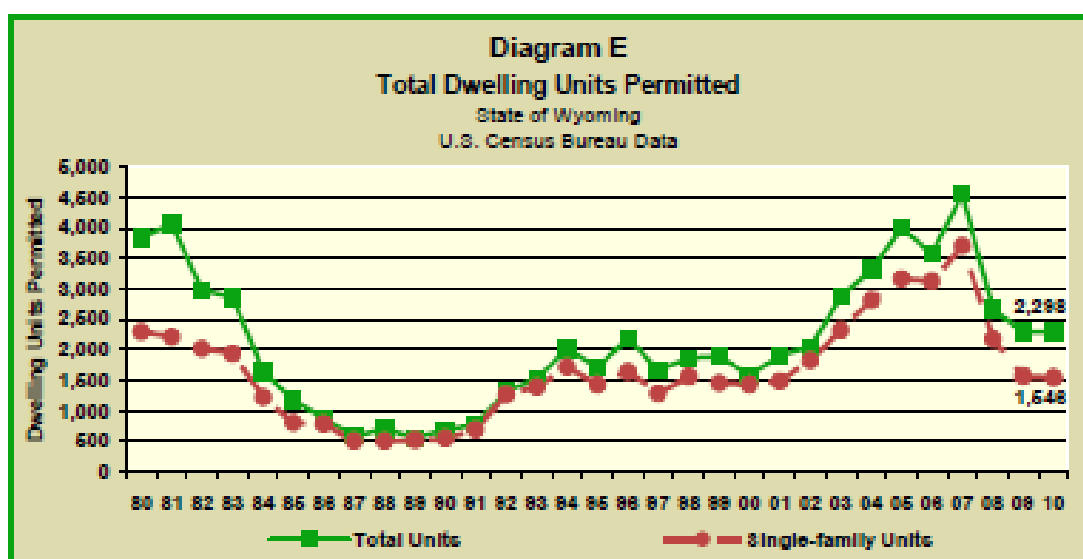
County	Average Sales Price										2010 Median Price	Number of 2010 Sales
	2004	2005	2006	2007	2008	2009	2010	% Change 2004–08	% Change 2008–09	% Change 2009–10		
Albany	175,320	182,000	184,159	212,313	222,151	215,069	225,991	26.7%	–3.2%	5.1%	204,000	303
Big Horn	76,279	80,607	87,384	107,966	109,295	89,239	124,608	43.3%	–18.4%	39.6%	110,000	71
Campbell	173,420	185,874	199,945	247,150	242,341	249,507	238,208	39.7%	3.0%	–4.5%	229,000	361
Carbon	94,377	96,200	118,335	148,813	151,093	155,259	150,244	60.1%	2.8%	–3.2%	150,000	92
Converse	115,800	141,949	148,804	173,375	187,131	178,401	189,267	61.6%	–4.7%	6.1%	179,800	123
Crook	109,050	138,128	138,568	166,892	170,602	224,241	140,858	56.4%	31.4%	–37.2%	140,000	26
Fremont	132,245	140,975	163,775	185,918	197,173	194,633	196,283	49.1%	–1.3%	0.8%	181,000	261
Goshen	93,965	102,053	116,812	123,393	131,037	119,207	136,174	39.5%	–9.0%	14.2%	125,600	136
Hot Springs	85,615	97,453	122,544	125,576	133,421	148,296	146,474	55.8%	11.1%	–1.2%	146,000	36
Johnson	164,125	180,209	194,500	214,710	220,549	215,744	204,277	34.4%	–2.2%	–5.3%	216,000	41
Laramie	155,467	165,743	179,338	191,863	202,304	193,759	208,842	30.1%	–4.2%	7.8%	189,000	959
Lincoln	170,814	187,924	259,458	300,092	246,253	218,350	246,864	44.2%	–11.3%	13.1%	208,000	89
Natrona	139,651	156,281	158,950	201,269	204,154	202,006	201,425	46.2%	–1.1%	–0.3%	176,250	736
Niobrara	57,155	69,218	81,420	83,988	98,935	96,643	101,450	73.1%	–2.3%	5.0%	83,500	14
Park	151,921	161,866	183,326	215,697	215,692	207,333	217,191	42.0%	–3.9%	4.8%	204,290	194
Platte	83,393	101,802	115,617	120,692	134,896	126,479	123,898	61.8%	–6.2%	–2.0%	119,000	62
Sheridan	162,917	186,095	220,225	240,779	240,270	233,281	242,635	47.5%	–2.9%	4.0%	213,000	331
Sublette	218,343	249,029	269,795	334,073	296,638	247,842	257,988	35.9%	–16.4%	4.1%	237,500	55
Sweetwater	142,688	179,000	195,981	230,063	242,470	232,959	213,689	69.9%	–3.9%	–8.3%	211,500	313
Teton	495,500	551,265	806,287	1,441,115	1,829,237	1,453,628	1,974,629	269.2%	–20.5%	35.8%	1,296,850	120
Uinta	112,540	137,911	145,243	168,204	197,390	194,928	181,269	75.4%	–1.2%	–7.0%	170,000	137
Washakie	102,144	102,948	123,072	123,363	133,754	150,202	147,467	30.9%	12.3%	–1.8%	138,190	86
Weston	64,784	80,313	107,437	140,127	129,108	164,337	145,512	99.3%	27.3%	–11.5%	138,000	40
Simple Average	142,501	159,776	187,869	239,019	258,082	239,624	261,532	81.1%	–7.2%	3.9%	189,900	195
Weighted Avg.	—	—	—	265,044	256,045	241,622	250,958	—	—	—	—	—

Source: Wyoming Housing Database Partnership 2011, Table I.36. Italics indicate counties in the socioeconomic study area.

Along with recent declines and volatility in the sales price of homes, many areas have seen declines in new residential building activity. The level of new residential building activity is shown for the state in Figure 3-1 and described in the following excerpt from a recent report by the Wyoming Housing Database Partnership (2011):

Wyoming’s housing market has certainly responded to moderating sales prices. New housing unit production, indicated by residential permits, exceeded 2,000 units every year from 2002 to 2010. There were 4,584 units permitted in 2007, an all-time high production year, of which 3,706 were for single-family units. However, permits fell roughly 42.0 percent between 2007 and 2008 and then slipped another 14.0 percent between 2008 and 2009. Single-family permits have taken the largest fall by dipping 57.5 percent in these two years. In 2010, residential permits remained at the 2009 levels with total permitted units increasing by four to 2,298 total units.

Figure 3-1. Statewide Trends in New Residential Housing Unit Permits



3.5 QUALITY OF LIFE

Wyoming consists of predominantly rural communities and relatively small urban population centers. As one of the least populated states in the nation, Wyoming offers a unique way of life for its residents.

The economy is dominated by oil and gas development, which has seen a significant boom over the last decade. As a result of the growing mineral extraction sector, particularly the oil and gas industry, the state has seen a rise in revenue. According to a recent Wyoming Heritage Foundation report, “in 2008, as a share of GDP, Wyoming spent more than the average state and its neighbors on K-12 education, highways, and natural resources” (2010). These increased spending levels can be directly attributed to the increased revenue from mineral severance taxes. There has also been an influx of out-of-state job seekers hoping to take advantage of the high number of mineral extraction jobs and perceived low cost of living. However, rapid in-migration has caused problems with the availability and affordability of housing in many energy resource development communities.

Additional industries contribute significantly to the economy and quality of life in Wyoming. Construction and transportation (some of which are related to energy development) are important contributors to the economy. Tourism and outdoor recreation are very important economically in many parts of the state. These activities rely significantly on the use of public lands, which are also important to the overall quality of life of all Wyoming residents.

In 2007, the Wyoming Rural Development Council released its seven-year community assessment synopsis. The assessment process involves annual community surveys across the state to determine the challenges, strengths, and goals of the citizens of these communities. The overall themes that emerged from these surveys provide a glimpse into the quality of life Wyoming residents enjoy. According to the seven-year synopsis of the annual surveys, Wyoming residents are impressed with the level of community leadership and feel the biggest community asset is the friendly people who pull together in times of need and demonstrate exceptional community involvement through volunteerism. Residents also appreciate the small size of their communities, which provides a safe environment with low crime. Moreover, the location, rural atmosphere, natural resources, and outdoor recreational activities are considered a valuable part of the community (Wyoming Rural Development Council 2007).

On the other hand, the growth of the oil and gas industry has not benefited all communities in the same way and has created a number of challenges. The influx of new residents lured by the promise of oil and gas jobs has created tensions in some communities struggling to adapt to the newcomers. For example, Sublette County has experienced significant growth due to the oil and gas boom. The 2008 *Community Satisfaction and Quality of Life Survey of Long-Term Residents of Sublette County* (Coburn 2008), suggests that long-term residents feel the influx of newcomers has had a negative effect on the community; and despite the economic advantages of the oil and gas industry, future growth is not viewed positively. Still other communities have not benefitted from the economic growth attributed to the oil and gas industry and are struggling to develop new industries for their small communities. In many instances, infrastructure and economic development limit the quality of life in many communities within the socioeconomic study area (Wyoming Rural Development Council 2007).

The Wyoming Rural Development Council released its 10-year community assessment results in 2011. The following excerpt from the summary report is a wide-ranging synopsis of the quality of life across the socioeconomic study area:

The challenges facing rural Wyoming have many common themes to explore. Some of the overall major problems and challenges include lack of affordable housing, needed infrastructure improvements, the out-migration of youth due to lack of jobs and opportunities in their hometown, overall lack of good paying jobs in rural communities, the need for beautification in rural communities, lack of vision and planning, growth in the rural communities being decided by external forces, and an overall lack of activities and services for youth, families, and seniors.

When exploring the overall strengths and assets in Wyoming's rural communities, it is easy to understand how proud the citizens of rural Wyoming are. The overall major strengths and assets include the people (biggest asset), friendly, people pull together in times of need, great volunteerism, small size of the community, safe, low crime, the location and rural atmosphere, natural resources, outdoor recreational activities of every possible type, and good community leadership.

...

it was revealed that overall, Wyoming's rural communities have similar hopes and desires. Every community wants to grow in the way that they choose, not one that is decided by an external source. Also, each community wants to preserve its unique history and culture, while building a future where their children can return to and be proud to live. (Wyoming Rural Development Council 2011)

3.6 SOCIAL ORGANIZATION AND INSTITUTIONS

Various government entities, institutions, social organizations, and interest groups are stakeholders to the management processes and decisions associated with the development and implementation of the BLM RMP and USFS LRMP amendments for sage-grouse management. The social organizations and

institutions identified in the initial phases of the BLM RMP revision process are listed in the sections below according to the following two categories: government; and firms, occupational and interest groups.

Undoubtedly, there are additional BLM RMP stakeholder organizations not mentioned below because they do not meet the criteria for inclusion *in this report*; this does *not* mean they are not important stakeholders and cannot participate in the RMP revision process. In addition, stakeholders to the USFS LRMP amendments are *not included* in this section. It is likely that many of the BLM RMP stakeholders listed here are also stakeholders of the USFS LRMPs. It is also likely that there are additional stakeholders that are focused on the USFS LRMPs.

3.6.1 Government

The list below includes the government entities that BLM initially invited to participate in the scoping process, and any additional government entities that provided comments as part of the scoping process. The 34 agencies that have formalized an official cooperating agency status with BLM are also noted.

3.6.1.1 Federal Government

The following federal government entities were identified as stakeholders.

Cooperating Agencies

- USFS – Medicine Bow-Routt National Forest – Thunder Basin National Grasslands
- U.S. Animal and Plant Health Inspection Service – Wildlife Services
- U.S. Fish and Wildlife Service
- U.S. Office of Surface Mining

Other Agencies

- USFS – Bridger-Teton National Forest
- USFS – Ashley National Forest
- U.S. Bureau of Indian Affairs
- U.S. Bureau of Reclamation
- U.S. Department of the Interior
- U.S. Environmental Protection Agency
- U.S. Geological Survey
- U.S. National Park Service
- U.S. Natural Resources Conservation Service
- U.S. Representative Cynthia Lummis’ Office
- U.S. Senator John Barrasso’s Office
- U.S. Senator Michael Enzi’s Office
- Western Area Power Administration

State Government

The following state government entities were identified as stakeholders.

Cooperating Agencies

- Wyoming Department of Agriculture
- Wyoming State Parks and Cultural Resources – State Historic Preservation Office
- Wyoming Department of Environmental Quality

- Wyoming Game and Fish Department
- Wyoming Governor’s Office
- Wyoming State Planning Office

Other Agencies

- Office of State Lands and Investments
- State Historic Preservation Office
- Wyoming Department of Transportation
- Wyoming State Engineer’s Office
- Wyoming State Forestry Division
- Wyoming State Geological Survey
- Wyoming State Grazing Board

3.6.1.2 Local Government

The following local government entities were identified as stakeholders.

Cooperating Agencies

- City of Laramie
- City of Rawlins
- City of Rock Springs
- Crook County Commissioners
- Lincoln County Commissioners
- Natrona County Commissioners
- Platte County Commissioners
- Sublette County Commissioners
- Sweetwater County Commissioners
- Uinta County Commissioners

Other Agencies

- Albany County Commissioners
- City of Casper
- City of Cheyenne
- City of Green River
- Converse County Commissioners
- Laramie County Commissioners
- Lincoln County Clerk
- Niobrara County Commissioners
- Sublette County Clerk
- Town of Baggs
- Town of Bairoil
- Town of Big Piney
- Town of Burns
- Town of Dixon
- Town of Elk Mountain
- Town of Encampment
- Town of Hanna
- Town of LaBarge
- Town of Marbleton
- Town of Medicine Bow

- Town of Pine Bluffs
- Town of Pinedale
- Town of Riverside
- Town of Rock River
- Town of Saratoga
- Town of Sinclair
- Town of Superior
- Town of Walden
- Town of Wamsutter
- Weston County Commissioners

Special Districts and Commissions

The following special districts and commissions were identified as stakeholders.

Cooperating Agencies

- Crook County Natural Resource District
- Lincoln Conservation District
- Lingle-Fort Laramie Conservation District
- Little Snake River Conservation District
- Medicine Bow Conservation District
- Natrona Country Conservation District
- Saratoga-Encampment-Rawlins Conservation District
- South Goshen Conservation District
- Sublette County Conservation District
- Sweetwater County Conservation District
- Uinta County Conservation District
- Weston County Natural Resource Conservation District
- Wyoming Pipeline Authority

Other Agencies

- Coalition of Local Governments
- Converse County Conservation District
- Laramie Rivers Conservation District
- North Platte Valley Conservation District
- Wyoming Oil and Gas Conservation Commission
- Wyoming Public Service Commission
- Wyoming Recreation Commission
- Wyoming Water Development Commission
- Wyoming Game and Fish Commission

3.6.2 Firms, Occupational and Interest Groups

The firms and occupational and interest groups listed below participated in the scoping meetings and/or provided written comments as part of the scoping process for this RMP. This category includes individual companies, business associations, and nonprofit organizations. In addition to the organizations listed, there were a number of individuals and anonymous stakeholders who provided input as part of the scoping process.

- Anadarko

- Aster Canyon Consulting
- Audubon Wyoming
- Biodiversity Conservation Alliance
- Black Hills Bentonite, LLC
- Bridger Coal Company
- Carbon County Stockgrowers
- Chesapeake Energy
- Chevron Mining Inc.
- Cole Creek Sheep Company
- Fidelity E and P
- FMC Corporation
- Garrett Ranch Company
- Gene George and Associates
- Grouse Mountain Environmental
- Kennecott Union Company
- Petroleum Association of Wyoming
- Powder River Basin Resource Council
- Power Company of Wyoming
- RES Americas
- Rocky Mountain Power
- Rock Springs Grazing Association
- Shell
- Short Powerline Services
- Sublette Examiner
- UR Energy
- Western Resource Advocates
- Williams Production
- Willis Ranch
- Wyoming Association of Municipalities
- Wyoming Power Producers Coalition
- Wyoming Board of Outfitters and Professional Guides
- Wyoming Business Council
- Wyoming Chapter of the Sierra Club
- Wyoming Conservation Alliance
- Wyoming Farm Bureau
- Wyoming Heritage Foundation
- Wyoming Land Holdings, Inc.
- Wyoming Livestock Board
- Wyoming Livestock Roundup
- Wyoming Mining Association
- Wyoming Natural Diversity Database
- Wyoming Outdoor Council
- Wyoming People for the USA
- Wyoming Pipeline Authority
- Wyoming Ranch Company LLC
- Wyoming Sportsman’s Association

3.7 ATTITUDES AND BELIEFS

Section 3.6 identified many organizations that are stakeholders to the use and management of BLM-administered lands. These stakeholder organizations, as well as individuals, have widely varying interests in the use and management of these resources.

Stakeholders have distinct sets of attitudes, beliefs, values, opinions, and perceptions about public resources and the effects of various management policies and actions. These views reflect different cultural and economic linkages people have to public lands.

The social impact analysis that will be conducted later in the planning process will use categories of stakeholders as one means of identifying the impacts of management actions under each alternative. By looking at the management actions from different points of view, one can identify potential social and cultural impacts on each stakeholder group.

Broad categories of stakeholders affected by the decisions to be made in this planning action are identified and characterized in the following sections, based primarily on comments made during the BLM public scoping period. It is likely that these categories are also reflective of the types of stakeholders to the USFS LRMP amendments for sage-grouse management.

The categorization of stakeholders is not meant to imply that all individuals and social groups fit neatly into a single category; many specific individuals or organizations may have multiple interests and would see themselves reflected in more than one stakeholder category. The point of categorization is to facilitate the impacts analysis phase of the planning process by allowing differentiation of social impacts based on broad differences in sociocultural linkages to public lands and associated points of view.

3.7.1 Wildlife/Ecosystem Conservation Stakeholders

These stakeholders believe that protecting at-risk species and maintaining the habitats and ecosystems for all species is a fundamental value and should be a high priority in public policy. With respect to sage-grouse, this group sees many individual and cumulative threats to the species and its habitat, including habitat loss from resource development and agricultural conversion; habitat fragmentation from oil and gas drilling, wind turbine sites, and other dispersed development; vegetative changes from grazing; proliferation of invasive species; fire; predation by other species; human disturbance from recreation, including OHV activities; climate change; and other factors.

These stakeholders believe that sage-grouse management should address the entire sagebrush ecosystem comprehensively to address the range of threats and because other sagebrush obligate species' populations are also in decline. As one commentator stated, "What the sage-grouse really needs is a comprehensive range-wide conservation plan ... and adoption of the full suite of management measures and protections necessary to ensure the survival of sage-grouse and its essential habitat." These stakeholders place a particular importance on protecting "large expanses of interconnected, intact sagebrush free from human disturbance." They value both core areas and noncore areas, including seasonal habitat and connectivity areas. They feel that noncore areas should not become "sacrifice" areas.

3.7.2 Mineral Development Stakeholders

These stakeholders believe mineral development is a vital component of the national, state, and local economies—creating jobs, generating income, and contributing tax and royalty payments to all levels of government. They also believe mineral development is socially important because it has been part of the social fabric of Wyoming for years and because it supports the social systems of local communities by providing private-sector livelihoods and revenues to local government. Public scoping comments from these stakeholders focused particularly on oil and gas development, with some attention to coal mining as

well. Comments reflected the view that restrictions on development of Wyoming’s energy reserves would require the nation to rely more heavily on foreign sources of energy and would impact the state and many local communities.

Mineral development stakeholders are concerned about the adverse impacts sage-grouse management decisions could have on the mineral development and production industry in Wyoming. Their concerns include the potential for reduced access on BLM land through exclusions, buffer distances, well spacing/density restrictions, and road development limitations. They also believe other requirements could impact the viability of projects; for instance, that requirements for subsurface water injection, land reclamation, and data collection and monitoring could exceed the financial limitations of operators or contradict their return on investment expectations. They are also concerned that sage-grouse restrictions could abrogate operators’ valid existing rights.

These stakeholders believe that the oil and gas industry has already done much to support sage-grouse and associated habitat. For example, one comment stated that the industry has “actively worked with BLM and the State to develop reasonable measures to protect Sage-grouse and associated habitat. To that end, an unprecedented comprehensive effort is underway by the energy industry to ensure the survival of the Sage-grouse in areas of oil and natural gas exploration and development. We urge BLM to recognize and iterate in the plan amendments the dynamic mitigation measures that have been utilized by the oil and gas industry for over two decades to protect Sage-grouse.”

3.7.3 Renewable Energy Development Stakeholders

This stakeholder group believes that renewable energy development is important at national, state, and local levels. These stakeholders point to national policies, such as the Energy Policy Act of 2005, that promote renewable energy development, and they highlight Wyoming’s wind energy resources as some of the best in the nation. They note that developing this resource creates jobs and income and generates tax revenues and thereby supports both local economies and social systems.

Renewable energy development stakeholders are concerned that sage-grouse management decisions could have adverse impacts on this emerging industry. They are concerned that decisions could reduce access to the resource or affect the industry’s ability to develop the resource in an economical manner. They believe that wind energy developers are already making good efforts to protect sage-grouse and associated habitat. The ability to obtain rights-of-way (ROW) and build electric power transmission lines is also a very important matter to these stakeholders, as this infrastructure is essential to getting power to market.

3.7.4 Livestock Grazing Stakeholders

These stakeholders believe that ranching and livestock grazing are essential components of the landscape, economy, and social fabric of rural areas. One illustrative public scoping comment was the following: “In addition to its economic significance, livestock grazing provides irreplaceable environmental and social values. These values contribute irreplaceable wildlife habitat, open spaces, rangeland buffers between federal lands and developments, scenic vistas, visual beauty, and the traditional image and heritage of the historic rural landscapes of Wyoming and the West.” These stakeholders support the livelihoods and traditions associated with grazing and ranching, which they view as central to the vitality and values of local communities. They are concerned that sage-grouse management decisions could affect ranchers’ operations on BLM lands. They also note that grazing on public lands helps ranchers maintain their operations on private lands and continue providing key wildlife habitat and other public values on those private lands.

Livestock grazing stakeholders believe that livestock operators have irreplaceable, long-term, on-the-ground knowledge that should be used to its full advantage to manage grazing and habitat values together. They point to improvements in rangeland health that have occurred through the coordinated efforts of BLM and grazing permittees, and they believe this collaborative approach is essential.

3.7.5 Recreation Stakeholders

Few comments reflecting concerns of recreation stakeholders emerged in the scoping process. Nonetheless, recreation interests nearly always come into play in RMP/EIS processes. These stakeholders favor access to BLM public lands for recreational purposes. (Subgroups may differ on degrees of access for motorized or nonmotorized recreation.) The potential for reduced access to BLM lands due to sage-grouse management actions is a concern for this group. Members believe uses that do not conflict with sage-grouse management should not be unnecessarily restricted.

3.8 ENVIRONMENTAL JUSTICE

The concept of environmental justice (EJ) first became a required consideration for federal agencies with the publication of Executive Order (EO) 12898 on February 11, 1994. The EO requires each federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations” (EO 12898, §59 *Federal Register* 7629, 1994).

To address EJ considerations in the BLM planning context, a screening analysis of the appropriate socioeconomic study area for the planning action is required to identify whether any “EJ populations” are present. If present, attention is needed in the planning process to determine whether there are any disproportionately high and adverse impacts on those populations, and if so, to take measures to avoid or mitigate those impacts.

The next subsection discusses the technical definitions used in identifying EJ populations and the definition of “disproportionately high and adverse” effects. The concluding subsection presents the results of the screening analysis.

Definitions

Subsequent to publication of the EO, the Council on Environmental Quality (CEQ), part of the Executive Office of the President, issued guidance for considering EJ within the National Environmental Policy Act (NEPA) process (Council on Environmental Quality, 1997). This guidance defines minorities as individual(s) who are members of the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. The guidance further defines a “minority population” as follows:

Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis.

The guidance also makes clear that Indian Tribes in the affected area should also be considered in the EJ analysis.

The CEQ guidance states that “low income” should be determined using the annual statistical poverty thresholds from the U.S. Census Bureau. That is, persons living under the poverty income threshold are potentially of concern. The guidance does not specify how to identify a “low-income population,” but in practice the same approach used for minority populations can be followed—where persons in poverty

status are greater than 50 percent of the area’s total population or where the percentage in poverty is meaningfully greater than the percentage in the general population or an appropriate comparison area.

The CEQ guidance does not define what constitutes “meaningfully greater.” In practice, meaningfully greater is often defined to identify an EJ population if the percentage of population in minority and/or poverty status in an area is at least 10 percentage points higher than in the comparison area. This threshold is based on experience evaluating EJ indicators and the sense that this threshold represents a significant difference between the affected and comparison populations. It is not a “hard and fast” rule and, in some cases, the appropriate difference to consider might be lower or higher.

As to “disproportionately high and adverse” effects, the CEQ guidance states:

Disproportionately high and adverse human health effects: When determining whether human health effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable:

- (a) Whether the health effects, which may be measured in risks and rates, are significant (as employed by NEPA), or above generally accepted norms. Adverse health effects may include bodily impairment, infirmity, illness, or death; and*
- (b) Whether the risk or rate of hazard exposure by a minority population, low-income population, or Indian tribe to an environmental hazard is significant (as employed by NEPA) and appreciably exceeds or is likely to appreciably exceed the risk or rate to the general population or other appropriate comparison group; and*
- (c) Whether health effects occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards.*

Disproportionately high and adverse environmental effects: When determining whether environmental effects are disproportionately high and adverse, agencies are to consider the following three factors to the extent practicable:

- (a) Whether there is or will be an impact on the natural or physical environment that significantly (as employed by NEPA) and adversely affects a minority population, low-income population, or Indian tribe. Such effects may include ecological, cultural, human health, economic, or social impacts on minority communities, low-income communities, or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment; and*
- (b) Whether environmental effects are significant (as employed by NEPA) and are or may be having an adverse impact on minority populations, low income populations, or Indian tribes that appreciably exceeds or is likely to appreciably exceed those on the general population or other appropriate comparison group; and*
- (c) Whether the environmental effects occur or would occur in a minority population, low-income population, or Indian tribe affected by cumulative or multiple adverse exposures from environmental hazards. (Council on Environmental Quality, 1997)*

The guidance and the presidential memorandum that accompanied the EO emphasize that agencies should provide opportunities for effective community participation in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities.

Screening Analysis

Identification of potential EJ populations requires data on population makeup (numbers of persons by race), data on poverty (numbers of persons living under the poverty level), and identification of any special Indian Tribe areas, such as reservations. The data must be sufficiently disaggregated to show any significant variations across the socioeconomic study area in concentrations of minority populations or

populations living in poverty. The most recent data broken down to the county level in the socioeconomic study area is from the 2010 Census for race and the U.S. Census Bureau 2005–2009 American Community Survey 5-year Estimates for poverty.

Table 3-8 shows data for race for each county in the socioeconomic study area. Table 3-9 shows data on population below the poverty level. These tables also show the corresponding data for two reference populations: Wyoming and the United States.

In both tables, the data for each minority or poverty group is expressed as a percentage of the total population. For this screening analysis, the convention noted above was adopted: if the minority population or population in poverty was more than 10 percentage points greater than for one of the reference populations, the county was “flagged” as having a potential EJ population. Therefore, it is an area of *potential* concern from an EJ perspective.

The adjective *potential* is emphasized here. No determination as to the likelihood of disproportionately high and adverse effects on these populations is made here. That determination can only be made once the management alternatives are defined and the socioeconomic impact analysis is performed. It should also be noted that the results (the places flagged) might be different based on more recent data.

Based on the definitions and threshold values noted above, and the data obtained for this study, the following places in the socioeconomic study area were flagged as areas of potential concern from an EJ perspective for the populations noted:

- **Fremont County** – Based on the population of American Indian/Alaska Native. Furthermore, the American Indian population of the Wind River Indian Reservation can be considered a potential EJ population based on CEQ’s specific guidance on Tribes.
- **Albany County** – Based on the population of all ages living in poverty.
- **Niobrara County** – Based on the population of 65 years and older living in poverty.

Depending on the management decisions that will be considered for the RMP and LRMP amendments, additional analysis at the subcounty level may be necessary during the impacts analysis phase of the planning process.

Table 3-8. Environmental Justice Indicators, Minority Population, 2010 Census

Geography	Total Population, 2010	Race							Hispanic
		White	Black/African American	American Indian/Alaska Native	Asian	Native Hawaiian/Pacific Islander	Some Other Race	Two or More Races	
		(%)	(%)	(%)	(%)	(%)	(%)	(%)	
United States	308,745,538	72.4	12.6	0.9	4.8	0.2	6.2	2.9	16.3
Wyoming	563,626	90.7	0.8	2.4	0.8	0.1	3.0	2.2	8.9
Albany	36,299	90.1	1.2	0.7	2.8	0.1	2.4	2.7	8.8
Campbell	46,133	93.2	0.3	1.2	0.6	0.0	2.7	2.1	7.8
Carbon	15,885	88.8	0.7	1.0	0.7	0.1	6.5	2.2	16.8
Converse	13,833	95.1	0.3	0.8	0.3	0.1	1.7	1.7	6.3
Crook	7,083	97.2	0.2	0.7	0.2	0.0	0.6	1.2	2.0
Fremont	40,123	74.3	0.3	21.2	0.4	0.0	1.0	2.8	5.6
Goshen	13,249	94.5	0.6	0.8	0.3	0.1	2.4	1.2	9.7
Laramie	91,738	88.5	2.5	1.0	1.1	0.2	3.8	3.1	13.1
Lincoln	18,106	95.4	0.2	0.8	0.3	0.0	2.0	1.2	4.3
Natrona	75,450	92.8	0.9	1.0	0.7	0.1	2.2	2.4	6.9
Niobrara	2,484	96.5	0.2	0.8	0.4	0.0	0.5	1.6	2.1
Park	28,205	95.6	0.2	0.6	0.6	0.1	1.4	1.6	4.8
Platte	8,667	95.4	0.3	0.4	0.4	0.1	2.0	1.5	6.7
Sublette	10,247	93.2	0.3	0.8	0.5	0.0	3.7	1.4	6.9
Sweetwater	43,806	88.5	1.0	1.0	0.8	0.1	6.4	2.3	15.3
Teton	21,294	88.4	0.2	0.5	1.1	0.1	8.1	1.6	15.0
Uinta	21,118	92.4	0.3	0.8	0.3	0.2	4.1	2.0	8.8
Weston	7,208	95.5	0.3	1.3	0.3	0.0	0.9	1.7	3.0

Yellow Shading and Bold (U.S. and Wyoming): Relevant reference population statistics.

Orange Shading and Bold (Counties): Statistics/places “flagged” for EJ impacts analysis.

Source: Population – U.S. Census Bureau, 2010 Census, Summary File 1, Table QT-P3.

Note: Hispanic population is an additional designation, not a race designation; the Hispanic population includes multiple races.

Table 3-9. Environmental Justice Indicators, Poverty, 2005–2009 American Community Survey

Geographic Area	Total Population in 2009	Percent of Population in Poverty			Percent of Families
		All Ages	Related Children Under 18 Years	65 Years and Over	
United States	307,006,550	13.5	15.3	9.8	9.9
Wyoming	544,270	9.6	11.7	6.6	6.1
Albany County	33,979	21.4	10.1	4.4	8.2
Campbell County	43,967	6.0	9.1	3.4	4.7
Carbon County	15,720	9.6	12.6	12.6	7.2
Converse County	13,578	6.8	5.6	7.7	4.1
Crook County	6,653	10.1	17	6.8	7.2
Fremont County	38,719	14.1	20.5	7.6	10.0
Goshen County	12,319	12.8	16.6	7.3	6.3
Laramie County	88,854	9.5	13.6	4.4	6.6
Lincoln County	16,995	6.9	11.3	4.1	3.8
Natrona County	74,508	9.6	12.1	8.9	6.4
Niobrara County	2,366	10.7	16.4	16.6	6.2
Park	27,193	7.8	11.3	6.5	4.3
Platte County	8,196	11	19.3	6.8	7.5
Sublette County	8,792	3.4	2	0.7	1.4
Sweetwater County	41,226	7.4	9.2	6.4	5.9
Teton	20,067	7.7	12.5	2.0	4.0
Uinta County	20,927	10.4	11.8	7.5	6.8
Weston County	7,009	7.3	9.5	10.8	5.9

Yellow Shading and Bold (U.S. and Wyoming): Relevant reference population statistics.

Orange Shading and Bold (Counties): Statistics/places “flagged” for EJ impacts analysis.

Source: Population – U.S. Census Bureau 2009b; Poverty – U.S. Census Bureau 2009a (2005-2009 American Community Survey).

CHAPTER 4—ECONOMIC CONDITIONS

4.1 EMPLOYMENT

Table 4-1 shows that the statewide unemployment rate tracked closely with the unemployment rate of the nation from 1995 to 2000. From 2001 to 2009, however, the unemployment rate for the state was lower than the national rate, likely as a result of the boom in oil and gas development and production during this time. At the county level, Albany, Teton, and Sublette counties have had the most consistently low unemployment rate. Even during the recent economic recession, Albany and Sublette counties stayed below 5.0 percent unemployment, except that Albany County in 2010 rose to 5.1 percent. Albany County is helped by strong demand generated by or associated with the university, and Sublette County enjoys a strong mining industry. Teton County benefited from its strong resort economy until the recent recession—unemployment rose sharply there in 2009 and 2010. Beginning in 2001 through 2008, Campbell County maintained the generally lowest level of unemployment, no doubt due to a strong mining industry. Fremont County has consistently seen the highest rate of unemployment, reaching a peak of 8.1 percent in 1998; the most recent recession brought an unemployment rate of 8.0 percent in 2010, just below Teton County’s 2010 rate of 8.3 percent. The Fremont County situation may be due in part to the problem of endemic unemployment in the Indian population, the prevalence of retail trade and construction industries in Fremont County that are highly susceptible to economic downturns, and the decline of the mining industry. Lincoln County has suffered the most from the economic downturn with an unemployment rate of 9.2 percent in 2010. Lincoln County’s dominant industry in 2007 was construction, which was strongly affected by the economic recession.

Historical data on jobs by sector demonstrate the relative importance of different industries to the socioeconomic study area over time. The figure and tables below provide several views of historical employment:

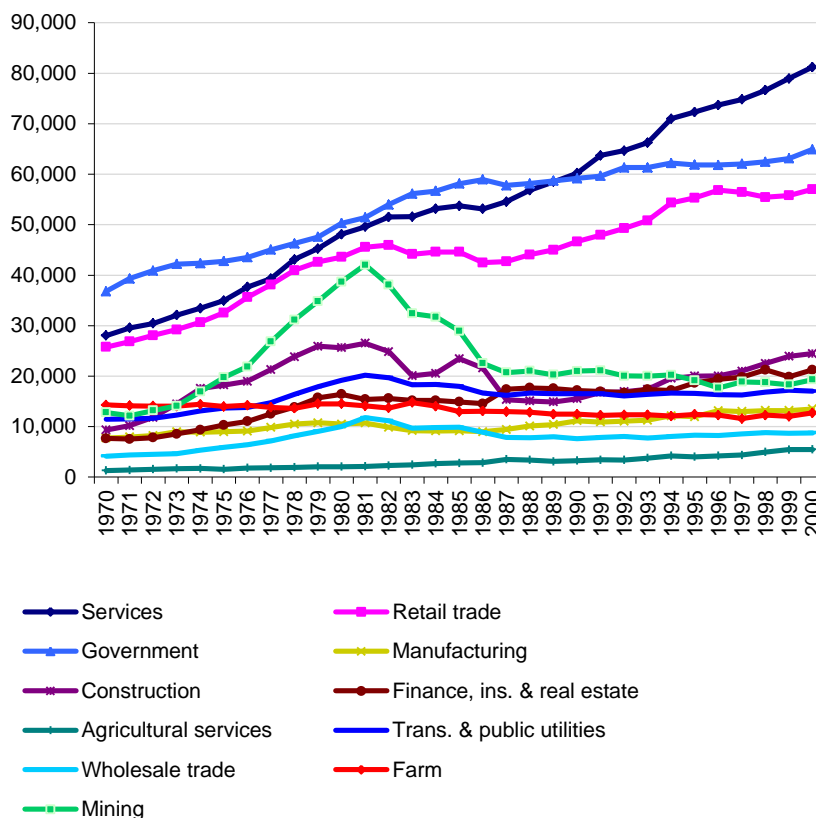
- **Trends in employment between 1970 and 2000, statewide, by Standard Industrial Classification (SIC) industries (Figure 4-1).** This graph shows long-term trends at the state level. Given that the socioeconomic study area has nearly 89 percent of the state population (as of 2010) and includes the state’s largest economic hubs, statewide historical trends are highly indicative of trends across the socioeconomic study area as a whole.
- **Trends in employment across all industries between 2001 and 2009, statewide, by North American Industry Classification System (NAICS) industries (Table 4-2).** This data shows overall trends since 2001, including into the recession.
- **Snapshots of employment in selected industries in 2007, by county, by NAICS industries (Table 4-3 and Table 4-4).** This data shows employment at the county level in key industries prior to any perturbations from the recession. The selected industries are the largest six services industries (not counting the catch-all “Other Services”) and the largest four nonservice industries, by 2007 employment.

This information uses two data sets and industry classifications because the Bureau of Economic Analysis (BEA) switched in 2001 from the SIC codes to the NAICS codes to better capture new industries that did not exist when the SIC classifications were created. The two data sets are not readily comparable. Note that although the BEA estimates annual employment and earnings for counties nationwide, it does not show some information (e.g., total employment for an industry sector that has few companies within a particular geography) to ensure that it does not violate confidentiality for those companies.

Between 1970 and 2000, Figure 4-1 shows that *Government* was the largest employment sector in Wyoming between 1970 and 1990, and *Services* became the largest sector after 1990. *Retail Trade* was the third largest sector during the 1970 to 2000 period. All three industries showed strong growth through

the period, albeit with some minor downturns and flat periods for both *Retail Trade* and *Government*. *Mining* (which includes oil and gas development and production) had very strong growth in jobs between 1970 and 1981, then experienced a sharp downturn between 1982 and 1987, followed by flat employment during the rest of the period. *Construction* had similar but less pronounced growth, then declined between 1982 and 1987. This pattern reflects *Construction*'s linkages to *Mining*; for example, oil and gas development requires well pad, road, and utility development. *Construction* had slow growth after 1987. All other industries had very modest growth between 1970 and 2000.

Figure 4-1. Trends in Employment by Industry, Wyoming, 1970–2000



Source: Economic Profile System – Human Dimensions Toolkit, Socioeconomic Measures Report, July 27, 2012, based on data obtained from the BEA, Regional Economic Analysis System, Table CA25.

Table 4-2 shows more recent trends, based on NAICS codes between 2001 and 2009. As noted above, this data is not entirely comparable to the earlier data based on SIC codes, although some industry definitions are similar. *Government and Government Enterprises*, *Mining*, *Construction*, and *Manufacturing* are similarly defined across the SIC and NAICS data sets.

As shown in Table 4-2, total employment in Wyoming grew by 18.6 percent between 2001 and 2009. Industries that grew at substantially greater rates were *Finance and Insurance* (61.4 percent), *Mining* (61.0 percent), *Real Estate and Rental and Leasing* (59.5 percent), and *Educational Services* (39.5 percent). Industries with very low growth or with losses in employment were *Military* (2.1 percent), *Farm* (0.4 percent), *Retail Trade* (0.3 percent), *Management of Companies and Enterprises* (minus 1.5 percent), and *Manufacturing* (minus 5.4 percent). In some cases, these low to negative growth rates reflect the impact of the recession outweighing growth that occurred earlier in the period.

Table 4-3 and Table 4-4 provide a snapshot of industry employment by county for the socioeconomic study area based on NAICS codes for the year 2007. These tables show data for selected industries only. County-level NAICS-based data that is more recent than 2007 is available; however, the data used here from just prior to the recession is probably more reflective of the longer term profile of the socioeconomic study area than a data snapshot taken during the recession or early recovery period.

In 2007, throughout the socioeconomic study area, *Government and Government Enterprises* accounted for a large percentage of employment. This percentage was highest in Albany County (35.6 percent) and lowest in Teton County (8.0 percent). The *Mining* industry accounted for a significant percentage of employment for Campbell (26.1 percent), Sublette (24.9 percent), Sweetwater (20 percent), Weston (14.4 percent), and Converse (12.4 percent) counties. Lincoln (22.4 percent), Carbon (14.4 percent), Sublette (13.2 percent), Uinta (12.2 percent), Crook (11.1 percent), and Teton (11.0 percent) counties all had significant percentages of employment in the *Construction* industry in 2007. *Accommodation and Food Services* was particularly important to employment in Teton (23.0 percent) and Park (10.6 percent) counties. *Healthcare and Social Assistance* provided over 10 percent of jobs in Natrona County (10.8 percent), while *Real Estate and Rental and Leasing* provided over 10 percent of jobs in Teton County (11.2 percent). *Retail Trade* provided over 10 percent of jobs (up to 12.6 percent) in multiple counties: Albany, Fremont, Goshen, Laramie, Natrona, Park, Platte, Uinta, and Weston counties. *Farming* was most important in Niobrara (15.0 percent), Goshen (11.9 percent), Crook (11.9 percent), and Platte (10.4 percent) counties. Across all socioeconomic study area counties, *Manufacturing* provided no more than 4.8 percent of jobs (Goshen County), while *Professional, Scientific, & Technical Services* provided no more than 7.0 percent of jobs (Teton County).

Table 4-1. Annual Unemployment Rates, 1995–2010

County	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Albany	2.2	1.9	2.0	2.2	1.8	3.3	3.5	3.4	3.4	3.0	2.8	2.7	2.5	2.6	4.1	5.1
Campbell	4.8	4.9	5.0	5.0	5.2	3.1	2.7	3.0	3.7	3.1	2.7	2.2	2.1	2.0	5.3	6.0
Carbon	5.4	5.4	4.9	5.5	5.3	4.2	4.4	4.6	5.6	4.5	4.0	3.4	3.0	3.4	7.3	7.6
Converse	5.4	5.6	5.9	5.4	5.2	3.9	3.9	4.3	4.7	4.1	3.8	3.5	2.9	2.9	5.8	5.8
Crook	4.2	4.7	4.6	5.5	5.0	3.7	3.6	3.7	4.3	3.9	3.6	2.9	2.8	3.0	5.7	5.8
Fremont	7.5	8.0	7.9	8.1	7.6	5.2	5.2	5.4	5.8	5.2	4.8	4.4	3.8	4.3	7.8	8.0
Goshen	4.5	5.2	4.7	4.8	3.7	3.6	4.0	4.3	4.6	4.4	4.5	3.9	3.3	3.7	5.4	6.1
Laramie	3.8	3.7	3.7	3.7	3.5	3.7	4.1	4.3	4.6	4.6	4.2	3.9	3.6	4.0	6.5	7.5
Lincoln	7.5	6.9	6.2	6.4	6.1	3.9	4.0	4.7	4.6	4.0	4.2	3.6	2.6	3.7	7.9	9.2
Natrona	5.8	6.6	5.6	5.6	5.4	3.9	3.8	4.2	4.5	3.8	3.5	3.0	2.7	2.9	6.6	7.2
Niobrara	2.3	2.3	2.0	2.9	2.8	3.6	4.0	4.6	4.8	3.9	4.0	3.3	3.1	3.5	5.2	5.5
Park	4.2	4.5	4.5	4.7	4.6	4.0	4.3	4.6	4.6	4.2	4.1	3.6	3.1	3.6	6.2	6.9
Platte	4.4	4.0	4.0	5.0	4.5	4.0	4.2	4.8	5.3	5.2	5.0	4.5	4.1	4.2	6.2	6.9
Sublette	3.8	3.7	2.8	3.3	3.8	2.9	2.7	2.9	3.2	2.4	2.1	1.9	1.5	1.7	4.5	4.6
Sweetwater	5.4	6.5	5.6	5.5	6.3	4.0	4.0	4.2	4.1	3.4	3.0	2.5	2.3	2.5	6.5	6.7
Uinta	6.8	7.6	5.9	5.9	7.0	4.0	3.8	4.3	4.7	3.9	3.5	3.1	2.7	3.0	6.9	7.0
Teton	2.4	2.9	2.4	2.1	2.3	2.4	2.7	3.1	3.6	3.2	3.1	2.5	2.2	3.0	6.9	8.3
Weston	4.9	5.4	5.3	5.0	5.5	4.2	4.2	4.1	4.7	4.1	4.1	3.6	3.2	3.3	6.4	6.3
Wyoming	4.9	5.1	4.8	4.9	4.8	3.9	3.9	4.1	4.5	3.9	3.7	3.2	2.9	3.2	6.4	7.0
United States	5.6	5.4	5.0	4.5	4.2	4.0	4.7	5.8	6.0	5.5	5.1	4.6	4.6	5.8	9.3	9.6

Source: BLS 1995 – 2010.

Table 4-2: Wyoming Employment, 2001–2009

	2001	2002	2003	2004	2005	2006	2007	2008	2009	Change 2001– 2009 (#)	Change 2001– 2009 (%)
Total Employment	330,878	333,771	336,901	344,343	355,201	371,472	390,073	401,501	392,431	61,553	18.6
Farm Employment	12,447	13,160	12,124	11,837	11,523	11,180	12,584	12,682	12,502	55	0.4
Nonfarm Employment	318,431	320,611	324,777	332,506	343,678	360,292	377,489	388,819	379,929	61,498	19.3
Private Employment	253,157	254,492	257,623	264,870	275,184	291,790	307,283	317,311	306,013	52,856	20.9
Forestry, Fishing, and Related Activities	2,601	2,658	2,516	2,631	2,594	2,563	2,669	2,779	2,822	221	8.5
Mining	20,671	20,128	21,434	23,019	25,413	29,950	31,668	34,974	33,273	12,602	61.0
Utilities	(D)	(D)	2,168	2,232	2,312	2,355	2,524	2,574	2,566	NA	NA
Construction	27,291	(D)	27,270	27,378	29,522	33,248	36,363	37,976	33,273	5,982	21.9
Manufacturing	11,404	(D)	10,706	10,873	11,217	11,789	11,961	11,661	10,788	-616	-5.4
Wholesale Trade	7,741	7,814	7,785	8,236	8,708	9,172	9,683	10,062	9,663	1,922	24.8
Retail Trade	39,010	38,907	38,962	38,905	39,560	40,041	41,266	41,103	39,111	101	0.3
Transportation and Warehousing	(D)	(D)	11,683	12,213	12,936	13,929	14,917	14,982	14,231	NA	NA
Information	(D)	(D)	4,831	5,003	5,067	4,935	4,793	4,782	4,744	NA	NA
Finance and Insurance	10,302	10,904	11,172	11,333	11,535	11,738	13,193	15,211	16,625	6,323	61.4
Real Estate and Rental and Leasing	11,940	11,941	11,963	13,432	15,102	16,657	18,578	19,379	19,047	7,107	59.5
Professional, Scientific, and Technical Services	13,885	13,756	13,854	14,720	15,172	16,018	17,022	17,385	16,810	2,925	21.0
Management Of Companies and Enterprises	943	1,014	778	896	917	1,027	1,031	966	929	-14	-1.5
Administrative and Waste Services	11,522	11,668	11,843	11,437	11,262	11,940	13,098	12,873	12,191	669	5.8
Educational Services	2,382	2,595	2,628	2,796	2,945	3,143	2,998	3,186	3,323	941	39.5

	2001	2002	2003	2004	2005	2006	2007	2008	2009	Change 2001– 2009 (#)	Change 2001– 2009 (%)
Health Care and Social Assistance	22,917	23,264	24,207	24,958	25,322	25,973	27,005	27,973	28,900	5,983	26.1
Arts, Entertainment, and Recreation	6,350	5,715	5,795	5,959	6,104	6,285	6,480	6,623	6,707	357	5.6
Accommodation and Food Services	28,507	30,033	30,575	31,281	31,696	32,371	32,980	34,042	32,646	4,139	14.5
Other Services, Except Public Administration	(D)	(D)	17,453	17,568	17,800	18,656	19,054	18,780	18,364	NA	NA
Government and Government Enterprises	65,274	66,119	67,154	67,636	68,494	68,502	70,206	71,508	73,916	8,643	13.2
Federal, Civilian	7,186	7,344	7,685	7,645	7,490	7,300	7,280	7,452	7,794	608	8.5
Military	6,122	6,069	6,130	6,217	6,138	6,113	6,130	6,129	6,252	130	2.1
State and Local	51,966	52,706	53,339	53,774	54,866	55,089	56,796	57,927	59,870	7,904	15.2

Source: U.S. Department of Commerce, BEA, Regional Income Division, Table CA25N, April 2011.

(D) Indicates that value was not disclosed due to confidentiality.

NA: Not applicable (lack of data disclosure prevented calculation of the value).

Table 4-3. Employment in Selected Industries – Total Number Employed, 2007

	Total Employment	Farm	Mining	Const.	Mfg.	Retail Trade	Real Estate & Rental Leasing	Prof., Scientific, & Technical Services	Health Care & Social Assistance	Accom. & Food Services	Govt. & Govt. Enterprises
Albany	21,550	497	49	1,263	616	2,179	643	1,389	1,410	1,768	7,679
Campbell	32,398	695	8,449	3,980	712	2,828	631	1,042	1,009	1,977	4,038
Carbon	11,125	366	367	1,603	(D)	1,097	534	296	(D)	1,074	2,164
Converse	7,815	518	966	703	149	750	315	196	(D)	607	1,403
Crook	4,187	483	413	464	173	342	(D)	115	165	286	731
Fremont	24,363	1,497	1,030	1,944	634	2,707	1,174	903	(D)	1,679	5,534
Goshen	7,385	882	(D)	483	354	755	332	252	(D)	366	1,226
Laramie	61,602	915	(D)	4,173	1,784	7,475	2,827	2,740	4,586	4,462	16,772
Lincoln	11,104	606	786	2,487	333	979	490	382	445	626	1,786
Natrona	53,848	485	5,225	4,226	2,204	6,560	2,844	2,552	5,821	3,721	6,074
Niobrara	1,748	263	(D)	(D)	(D)	(D)	(D)	(D)	72	(D)	416
Park	20,434	936	742	1,887	707	2,567	922	962	1,642	2,162	3,560
Platte	5,740	596	(D)	367	134	591	299	204	(D)	472	933
Sublette	7,709	427	1,919	1,018	95	587	287	321	(D)	556	925
Sweetwater	30,815	267	6,170	2,738	1,325	3,045	1,122	838	1,268	2,495	4,377
Teton	27,455	178	(D)	3,129	201	2,254	3,068	1,921	950	6,327	2,268
Uinta	13,271	387	1,123	1,614	355	1,677	586	542	1,320	888	2,188
Weston	5,191	278	749	374	152	539	321	248	287	(D)	838
Study Area	347,740	10,276	27,988	32,453	9,928	36,932	16,395	14,903	18,9754	29,466	62,912
Wyoming	389,485	12,579	31,326	36,389	11,840	41,276	18,710	17,011	27,004	33,000	70,203

Source: BEA 2007, Table CA25N.

(D) Indicates that value was not disclosed due to confidentiality; (L) Less than 10 jobs, but the estimates for this item are included in the totals.

Note: Numbers for 2007 for Wyoming do not exactly match the figures in Table 4-2 above as that table's data source is more recent and has been updated.

Table 4-4. Employment in Selected Industries – Share of Total Employment, 2007

	Total Employment	Farm	Mining	Constr.	Mfg.	Retail Trade	Real Estate & Rental Leasing	Prof., Scientific, & Technical Services	Health Care & Social Assistance	Accom. & Food Services	Govt. & Govt. Enterprises
Albany	21,550	2.3%	0.2%	5.9%	2.9%	10.1%	3.0%	6.4%	6.5%	8.2%	35.6%
Campbell	32,398	2.2%	26.1%	12.3%	2.2%	8.7%	1.9%	3.2%	3.1%	6.1%	12.5%
Carbon	11,125	3.3%	3.3%	14.4%	(D)	9.9%	4.8%	2.7%	(D)	9.7%	19.5%
Converse	7,815	6.6%	12.4%	9.0%	1.9%	9.6%	4.0%	2.5%	(D)	7.8%	18.0%
Crook	4,187	11.5%	9.9%	11.1%	4.1%	8.2%	(D)	2.7%	3.9%	6.8%	17.5%
Fremont	24,363	6.1%	4.2%	8.0%	2.6%	11.1%	4.8%	3.7%	(D)	6.9%	22.7%
Goshen	7,385	11.9%	(D)	6.5%	4.8%	10.2%	4.5%	3.4%	(D)	5.0%	16.6%
Laramie	61,602	1.5%	(D)	6.8%	2.9%	12.1%	4.6%	4.4%	7.4%	7.2%	27.2%
Lincoln	11,104	5.5%	7.1%	22.4%	3.0%	8.8%	4.4%	3.4%	4.0%	5.6%	16.1%
Natrona	53,848	0.9%	9.7%	7.8%	4.1%	12.2%	5.3%	4.7%	10.8%	6.9%	11.3%
Niobrara	1,748	15.0%	(D)	(D)	(D)	(D)	(D)	(D)	4.1%	(D)	23.8%
Park	20,434	4.6%	3.6%	9.2%	3.5%	12.6%	4.5%	4.7%	8.0%	10.6%	17.4%
Platte	5,740	10.4%	(D)	6.4%	2.3%	10.3%	5.2%	3.6%	(D)	8.2%	16.3%
Sublette	7,709	5.5%	24.9%	13.2%	1.2%	7.6%	3.7%	4.2%	(D)	7.2%	12.0%
Sweetwater	30,815	0.9%	20.0%	8.9%	4.3%	9.9%	3.6%	2.7%	4.1%	8.1%	14.2%
Teton	27,455	0.6%	(D)	11.0%	0.7%	8.0%	11.2%	7.0%	3.0%	23.0%	8.0%
Uinta	13,271	2.9%	8.5%	12.2%	2.7%	12.6%	4.4%	4.1%	9.9%	6.7%	16.5%
Weston	5,191	5.4%	14.4%	7.2%	2.9%	10.4%	6.2%	4.8%	5.5%	(D)	16.1%
Study Area	299,851	3.1%	9.1%	9.2%	3.0%	10.7%	4.1%	4.0%	5.5%	7.0%	19.0%
Wyoming	389,485	3.2%	8.0%	9.3%	3.0%	10.6%	4.8%	4.4%	6.9%	8.5%	18.0%

Source: BEA 2007, Table CA25N.

(D) Indicates that value was not disclosed due to confidentiality; (L) Less than 10 jobs, but the estimates for this item are included in the totals.

4.2 EARNINGS AND PAY

Earnings are defined as the sum of wage and salary disbursements¹, supplements to wages and salaries, and proprietors' income (BEA 2010b).

Historical data on earnings by sector demonstrate the relative importance of different industries to the socioeconomic study area over time. The tables below provide several views of historical employment:

- **Trends in earnings across all industries between 2001 and 2009, statewide, by NAICS categories (Table 4-5).** This data shows overall trends since 2001, including into the recession. Given that the socioeconomic study area has nearly 89 percent of the state population and includes the state's largest economic hubs, the statewide situation is highly indicative of conditions across the socioeconomic study area as a whole.
- **Snapshots of employee compensation in selected industries in 2007, by county, by NAICS (Table 4-6 and Table 4-7).** This data shows this important component of earnings at the county level in key industries prior to any perturbations from the recession.²

Table 4-5 shows how earnings by industry have changed between 2001 and 2009, statewide. The greatest total dollar increases were experienced in *Mining* (\$1.598 billion) and *State and Local Government* (\$1.432 billion). *Construction* (\$0.599 billion) and *Health Care and Social Assistance* (\$0.613 billion) also experienced large increases in earnings statewide. The greatest percentage increase in earnings also occurred in *Mining* (112.0 percent). Increases of over 70 percent occurred in *Management of Companies and Enterprises* (108.8 percent), *Educational Services* (98.2 percent), *Military* (82.1 percent), *Health Care and Social Assistance* (81.4 percent), *State and Local Government* (81.0 percent) and *Wholesale Trade* (73.4 percent). Industries with very low growth or with losses in employment were *Forestry, Fishing, and Related Activities* (8.7 percent); *Arts, Entertainment, and Recreation* (8.2 Percent); *Real Estate and Rental and Leasing* (−3.6 percent); and *Farming* (−75.6 percent). In some cases, these low to negative growth rates reflect the impact of the recession outweighing growth that occurred earlier in the period. In the case of *Farming*, earnings fluctuated dramatically throughout the 2001 to 2009 period.

Table 4-6 and Table 4-7 provide snapshots of employee compensation for the state and by county in the socioeconomic study area for 2007. Throughout Wyoming, *Government and Government Enterprises* (\$3,789,678, 25.6 percent) and *Mining* (\$2,321,388, 15.7 percent) represent the largest industries in terms of earnings and percentage of total compensation. At the county level, *Government and Government Enterprises* is the largest industry, in terms of earnings, for the majority of the socioeconomic study area. Albany (\$349,441,000; 49.7 percent), Carbon (\$109,382,000; 26.1 percent), Converse (\$68,863,000; 24.2 percent), Crook (\$33,678,000; 31.4 percent), Fremont (\$265,197,000; 35.9 percent), Goshen (\$53,662,000; 32.1 percent), Laramie (\$1,081,622,000; 44.2 percent), Niobrara (\$18,050,000; 47.3 percent), Platte (\$42,955,000; 25.6 percent), and Weston (\$36,505,000; 32.7 percent) counties have the highest percentages of earnings from the *Government and Government Enterprises* industry. *Mining* makes up the largest share of earnings for Campbell (\$696,959,000; 38.2 percent), Natrona (\$363,499,000; 17.1 percent), Sublette (\$158,471,000; 44.1 percent), Sweetwater (\$525,523,000; 32.8 percent), and Uinta (\$103,545,000; 21 percent) counties. Across the socioeconomic study area, *Construction* is the largest industry, in terms of earnings percentage, in Lincoln County (\$146,544,000; 35.3 percent) and is also very large (\$95,181,000; 22.7 percent) in Carbon County.

Table 4-8 shows the average annual pay by private sector industries for the counties in the socioeconomic study area. The data is from 2007, so it indicates average salaries prior to changes brought on by the

¹ Note that employee contributions to retirement programs, as a portion of wages, are captured in the figures cited.

² Employee compensation is the sum of employee wages and salaries and supplements to wages and salaries; in other words, all earnings except proprietor's income. In 2007 it constituted 87 percent of earnings. Selected industries match those used in the 2007 employment tables.

recession. The industry categories are different for this table because data was pulled from the Bureau of Labor Statistics, whereas previous industry data came from the BEA, which uses slightly different categories for industries. Across all industries in 2007, the annual pay for the socioeconomic study area ranged between \$24,715 (Goshen County) and \$45,106 (Sweetwater County). The highest average annual pay by a specific industry is the *Natural Resources and Mining* industry in Uinta County at \$82,150. The lowest average annual pay by a specific industry is the *Leisure and Hospitality* industry in Goshen County at \$8,124. By a wide margin, the *Natural Resources and Mining* industry provided the highest average annual wage (\$50,228) across the socioeconomic study area, followed by the *Construction* industry (\$41,039). The *Leisure and Hospitality* industry provided the lowest average annual wage (\$12,031).

Table 4-5: Wyoming Earnings by Industry, 2001–2009 (\$1,000s)

Category	2001	2002	2003	2005*	2006	2007	2008	2009	Change, 2001– 2009 (#)	Percent Change , 2001– 2009 (%)
Total Earnings by Place of Work	11,041,357	11,429,206	12,031,289	13,925,481	15,910,063	17,009,078	18,667,863	17,794,164	6,752,807	61.2
Farm Earnings	189,954	99,558	180,075	231,506	99,694	29,908	86,066	46,294	-143,660	-75.6
Nonfarm Earnings	10,851,403	11,329,648	11,851,214	13,693,975	15,810,369	16,979,170	18,581,797	17,747,870	6,896,467	63.6
Private Earnings	8,385,068	8,654,275	8,991,820	10,459,708	12,331,156	13,189,492	14,530,030	13,430,303	5,045,235	60.2
Forestry, Fishing, and Related Activities	46,627	46,680	49,716	47,722	49,196	50,216	49,663	50,666	4,039	8.7
Mining	1,427,557	1,415,656	1,553,820	2,054,920	2,719,904	2,780,735	3,502,357	3,025,834	1,598,277	112.0
Utilities	(D)	(D)	192,590	213,944	240,624	250,726	268,392	277,681	NA	NA
Construction	1,055,314	(D)	1,118,466	1,263,303	1,569,905	1,819,768	2,010,173	1,654,160	598,846	56.7
Manufacturing	517,920	(D)	510,960	557,648	637,599	675,965	717,253	692,672	174,752	33.7
Wholesale Trade	369,329	366,209	394,367	475,291	553,156	620,065	681,759	640,515	271,186	73.4
Retail Trade	817,169	822,872	859,677	936,119	1,031,776	1,105,628	1,109,775	1,055,929	238,760	29.2
Transportation and Warehousing	(D)	(D)	603,680	732,460	857,840	935,050	995,261	928,359	NA	NA
Information	(D)	(D)	166,021	179,734	192,388	200,307	208,421	209,895	NA	NA
Finance and Insurance	360,987	365,360	379,741	407,495	465,323	464,427	472,869	450,140	89,153	24.7
Real Estate and Rental and Leasing	312,237	351,652	326,542	404,327	400,202	321,396	320,149	300,854	-11,383	-3.6
Professional, Scientific, and Technical Services	499,479	520,416	505,899	609,485	692,908	781,059	871,566	841,597	342,118	68.5

Category	2001	2002	2003	2005*	2006	2007	2008	2009	Change, 2001– 2009 (#)	Percent Change , 2001– 2009 (%)
Management of Companies and Enterprises	41,721	60,305	67,038	78,907	96,056	94,591	92,810	87,120	45,399	108.8
Administrative and Waste Services	240,222	226,635	245,545	241,648	277,010	322,249	338,736	305,248	65,026	27.1
Educational Services	36,447	48,148	45,875	52,974	59,041	62,701	67,858	72,253	35,806	98.2
Health Care and Social Assistance	753,759	812,140	869,725	982,117	1,061,313	1,165,303	1,308,870	1,367,169	613,410	81.4
Arts, Entertainment, and Recreation	175,741	194,743	197,996	179,890	185,634	189,616	191,090	190,139	14,398	8.2
Accommodation and Food Services	420,881	462,286	490,784	579,888	707,210	729,096	723,563	692,806	271,925	64.6
Other Services, Except Public Administration	(D)	(D)	413,378	461,836	534,071	620,594	599,465	587,266	NA	NA
Government and Government Enterprises	2,466,335	2,675,373	2,859,394	3,234,267	3,479,213	3,789,678	4,051,767	4,317,567	1,851,232	75.1
Federal, Civilian	459,874	485,635	514,103	574,434	596,298	622,838	648,284	683,554	223,680	48.6
Military	238,043	279,035	313,141	361,525	362,801	375,125	394,467	433,455	195,412	82.1
State and Local	1,768,418	1,910,703	2,032,150	2,298,308	2,520,114	2,791,715	3,009,016	3,200,558	1,432,140	81.0

*2004 data removed due to space considerations.

Source: U.S. Department of Commerce, BEA, Regional Income Division, Table CA05N, April 2011

(D) Indicates that value was not disclosed due to confidentiality.

NA: Not applicable (lack of data disclosure prevented calculation of the value).

Table 4-6. Employee Compensation in Selected Industries, 2007 (\$1,000s)

County	Total Earnings	Farm	Mining	Const.	Mfg.	Retail Trade	Prof., Scienti., & Tech. Services	Real Estate & Rental Leasing	Health Care & Social Assist.	Accom. & Food Services	Govt. & Govt. Enterpris.
Albany	\$703,576	\$4,254	\$1,222	\$39,472	\$24,326	\$45,529	\$46,514	\$4,334	\$54,847	\$25,851	\$349,441
Campbell	\$1,826,089	\$3,501	\$696,959	\$224,109	\$49,809	\$84,417	\$56,896	\$11,395	\$44,726	\$36,691	\$222,078
Carbon	\$419,399	\$7,059	\$16,339	\$95,181	(D)	\$23,782	\$6,186	\$2,052	(D)	\$18,133	\$109,382
Converse	\$285,094	\$6,487	\$65,326	\$25,755	\$4,826	\$11,833	\$3,204	\$1,247	(D)	\$8,002	\$68,863
Crook	\$107,170	\$3,166	\$18,118	\$11,646	\$8,105	\$4,878	\$2,670	(D)	\$2,615	\$2,911	\$33,678
Fremont	\$738,663	\$10,051	\$63,767	\$52,090	\$16,130	\$62,574	\$33,242	\$17,014	(D)	\$26,294	\$265,197
Goshen	\$166,982	\$7,876	(D)	\$11,266	\$12,996	\$11,101	\$5,963	\$1,538	(D)	\$3,496	\$53,662
Laramie	\$2,444,744	\$9,713	(D)	\$160,347	\$105,551	\$174,205	\$92,965	\$21,223	\$167,790	\$94,992	\$1,081,622
Lincoln	\$415,292	\$3,049	\$67,297	\$146,544	\$9,576	\$18,685	\$9,352	\$617	\$6,608	\$6,199	\$86,084
Natrona	\$2,131,709	\$5,912	\$363,499	\$164,967	\$112,008	\$170,886	\$86,207	\$54,175	\$249,511	\$66,799	\$345,332
Niobrara	\$38,129	\$1,707	(D)	(D)	(D)	(D)	(D)	(D)	\$1,846	(D)	\$18,050
Park	\$1,165,655	\$7,090	\$70,899	\$77,368	\$25,009	\$63,558	\$33,972	\$10,108	\$66,741	\$43,160	\$183,882
Platte	\$167,572	\$5,831	(D)	\$10,678	\$2,800	\$10,096	\$2,782	\$442	(D)	\$5,927	\$42,955
Sublette	\$359,077	\$5,618	\$158,471	\$43,966	\$3,178	\$14,275	\$8,246	\$2,253	(D)	\$18,261	\$56,070
Sweetwater	\$1,603,126	\$1,429	\$525,523	\$148,566	\$122,832	\$85,282	\$35,574	\$25,998	\$36,058	\$49,221	\$219,046
Teton	\$2,553,721	\$4,141	(D)	\$168,205	\$5,777	\$83,254	\$114,065	\$78,160	\$63,427	\$225,551	\$134,652
Uinta	\$493,272	\$2,253	\$103,545	\$74,797	\$14,642	\$32,193	\$15,023	\$12,603	\$34,949	\$12,328	\$101,821
Weston	\$111,528	\$2,024	\$19,906	\$5,431	\$10,629	\$5,692	\$3,080	\$413	\$5,433	(D)	\$36,505
Study Area	\$15,730,798	\$91,161	\$2,170,871	\$1,460,388	\$528,194	\$902,240	\$555,941	\$243,572	\$734,551	\$643,816	\$3,408,320
Wyoming	\$14,791,335	\$123,455	\$2,321,388	\$1,513,082	\$623,725	\$966,834	\$550,905	\$200,747	\$946,665	\$679,054	\$3,789,678

Source: BEA 2007; Table CA05N.

(D) Indicates that value was not disclosed due to confidentiality; (L) Less than 10 jobs, but the estimates for this item are included in the totals.

Table 4-7. Employee Compensation in Selected Industries – Share of Total, 2007

County	Total Earnings	Farm	Mining	Const.	Mfg.	Retail Trade	Prof., Scient., & Tech. Services	Real Estate & Rental Leasing	Health Care & Social Assist.	Accom. & Food Services	Govt. & Govt. Enterpris.
Albany	\$703,576	0.6%	0.2%	5.6%	3.5%	6.5%	6.6%	0.6%	7.8%	3.7%	49.7%
Campbell	\$1,826,089	0.2%	38.2%	12.3%	2.7%	4.6%	3.1%	0.6%	2.4%	2.0%	12.2%
Carbon	\$419,399	1.7%	3.9%	22.7%	(D)	5.7%	1.5%	0.5%	(D)	4.3%	26.1%
Converse	\$285,094	2.3%	22.9%	9.0%	1.7%	4.2%	1.1%	0.4%	(D)	2.8%	24.2%
Crook	\$107,170	3.0%	16.9%	10.9%	7.6%	4.6%	2.5%	(D)	2.4%	2.7%	31.4%
Fremont	\$738,663	1.4%	8.6%	7.1%	2.2%	8.5%	4.5%	2.3%	(D)	3.6%	35.9%
Goshen	\$166,982	4.7%	(D)	6.7%	7.8%	6.6%	3.6%	0.9%	(D)	2.1%	32.1%
Laramie	\$2,444,744	0.4%	(D)	6.6%	4.3%	7.1%	3.8%	0.9%	6.9%	3.9%	44.2%
Lincoln	\$415,292	0.7%	16.2%	35.3%	2.3%	4.5%	2.3%	0.1%	1.6%	1.5%	20.7%
Natrona	\$2,131,709	0.3%	17.1%	7.7%	5.3%	8.0%	4.0%	2.5%	11.7%	3.1%	16.2%
Niobrara	\$38,129	4.5%	(D)	(D)	(D)	(D)	(D)	(D)	4.8%	(D)	47.3%
Park	\$1,165,655	0.6%	6.1%	6.6%	2.1%	5.5%	2.9%	0.9%	5.7%	3.7%	15.8%
Platte	\$167,572	3.5%	(D)	6.4%	1.7%	6.0%	1.7%	0.3%	(D)	3.5%	25.6%
Sublette	\$359,077	1.6%	44.1%	12.2%	0.9%	4.0%	2.3%	0.6%	(D)	5.1%	15.6%
Sweetwater	\$1,603,126	0.1%	32.8%	9.3%	7.7%	5.3%	2.2%	1.6%	2.2%	3.1%	13.7%
Teton	\$2,553,721	0.2%	(D)	6.6%	0.2%	3.3%	4.5%	3.1%	2.5%	8.8%	5.3%
Uinta	\$493,272	0.5%	21.0%	15.2%	3.0%	6.5%	3.0%	2.6%	7.1%	2.5%	20.6%
Weston	\$111,528	1.8%	17.8%	4.9%	9.5%	5.1%	2.8%	0.4%	4.9%	(D)	32.7%
Study Area	\$15,730,798	1.6%	13.7%	10.3%	3.5%	5.3%	2.9%	1.0%	3.3%	3.1%	26.1%
Wyoming	\$14,791,335	0.8%	15.7%	10.2%	4.2%	6.5%	3.7%	1.4%	6.4%	4.6%	25.6%

Source: BEA 2007; Table CA05N.

(D) Indicates that value was not disclosed due to confidentiality; (L) Less than 10 jobs, but the estimates for this item are included in the totals.

Table 4-8. Average Annual Pay by Industry, 2007

County	Natural Resources & Mining	Const.	Mfg.	Trade, Transp., & Utilities	Info.	Financial Activities	Prof. & Business Services	Edu. & Health Services	Leisure & Hospitality	Other Services
Albany	\$51,230	\$32,397	\$34,080	\$22,924	\$36,892	\$36,828	\$34,129	\$35,934	\$10,878	\$19,479
Campbell	\$70,933	\$49,242	\$57,146	\$41,199	\$31,142	\$39,865	\$50,162	\$43,872	\$13,926	\$42,888
Carbon	ND	\$58,369	ND	\$35,112	\$30,643	\$30,000	\$38,409	\$31,537	\$14,239	\$26,194
Converse	\$61,205	\$44,407	\$41,681	\$36,835	\$25,217	\$27,817	\$30,989	\$37,177	\$10,317	\$18,178
Crook	\$43,722	\$33,638	\$41,166	\$31,339	\$24,169	\$34,567	\$43,315	\$19,583	\$11,337	\$17,838
Fremont	\$56,835	\$33,413	\$27,787	\$29,028	\$27,729	\$37,583	\$56,131	\$32,596	\$12,817	\$28,612
Goshen	\$24,879	\$31,754	\$31,015	\$23,356	\$21,987	\$31,286	\$29,095	\$27,606	\$8,124	\$18,055
Laramie	\$33,478	\$40,547	\$46,911	\$28,987	\$41,459	\$41,278	\$35,489	\$36,186	\$15,848	\$29,874
Lincoln	\$74,398	\$62,363	\$27,540	\$33,975	\$33,967	\$27,294	\$36,189	\$18,516	\$8,625	\$19,856
Natrona	\$73,732	\$43,559	\$43,730	\$36,853	\$34,649	\$47,398	\$38,748	\$40,578	\$14,079	\$34,991
Niobrara	\$46,290	ND	ND	\$20,244	ND	\$24,238	\$21,430	\$28,721	ND	ND
Park	\$66,535	\$33,146	\$35,137	\$26,974	\$28,881	\$33,644	\$35,023	\$34,531	\$15,372	\$22,240
Platte	\$33,665	\$39,786	\$21,791	\$43,917	\$24,718	\$28,068	\$29,662	\$29,461	\$10,570	\$12,449
Sublette	\$73,982	\$50,326	\$34,262	\$38,231	\$37,778	\$44,072	\$49,509	\$27,722	\$26,258	\$26,459
Sweetwater	\$73,311	\$53,616	\$72,587	\$43,247	\$26,808	\$46,277	\$45,408	\$30,164	\$14,685	\$44,966
Teton	\$43,864	\$42,745	\$30,826	\$31,801	\$46,478	\$64,615	\$54,378	\$46,020	\$24,787	\$31,283
Uinta	\$82,150	\$46,390	\$38,693	\$31,341	\$49,743	\$42,001	\$31,917	\$24,950	\$11,058	\$23,329
Weston	\$55,067	\$36,811	\$61,883	\$27,265	\$25,763	\$30,555	\$40,173	\$23,103	\$9,729	\$23,749

Source: BLS 2012.

(ND) – No data available

4.3 INCOME

Table 4-9 shows personal income by source, based on 2005–2009 data. Income patterns for households³ in the socioeconomic study area are very similar to those of Wyoming and relatively similar to the United States, with a few exceptions. Campbell (92.8 percent) and Sweetwater (88.2 percent) counties have the highest and third highest percentage of households with earnings, and both are above the state and national rate. Campbell County also has the lowest percentage of households with social security income (15.5 percent) and retirement income (7.8 percent). These two counties also have a strong mining industry that pays higher wages and attracts younger workers. Albany County has the second highest percentage of households with earnings, probably as a result of many county residents being employed by University of Wyoming or businesses that rely on the university. Goshen and Platte counties have the lowest percentage of households with earnings: both are at 76.8 percent, which is lower than the state and national rate. Additionally, Goshen (38.7 percent) and Platte (37.8 percent) counties have the highest percentage of social security income relative to total earnings. Goshen County also has the highest percentage of households with public assistance income, at 4.0 percent. These indicators probably derive from the lack of a strong mining industry or other major economic opportunities that result in outmigration of working-age individuals.

Table 4-10 provides a look at statewide trends in personal income sources between 1970 and 2009 according to seven broad categories. The definitions of each of the labor and nonlabor categories are provided in APPENDIX A. Statewide, the majority of personal income in 2009 came from labor income (net earnings). However, the percentage of income from labor has declined from 75.8 percent in 1970 to 59.1 percent as of 2009, a drop of 16.7 percent, while the percentage of income from nonlabor sources has increased. Throughout the state, the following changes have occurred in the percentage share of total personal income: net earnings income has decreased; dividends, interest, and rent income has increased; and personal current transfer receipts income has increased. Within personal current transfer receipts income, income maintenance income (welfare) and unemployment insurance compensation income have remained relatively stable, while retirement and other income have increased.

A county-by-county look at net earnings as a percentage of total income is shown in Table 4-11. Within the socioeconomic study area, the decline in the net earnings share is consistent with statewide trends with a few exceptions. Campbell, Converse, Sublette, Sweetwater, and Uinta counties—all counties with strong mining industries—have seen no more than a 5 percentage point decline in net earnings as a percentage of personal income since 1970. Uinta County has seen the smallest drop at 2.2 percentage points. Teton County has seen the largest drop, from 69.2 percent to 39.1 percent, or 30.1 percentage points, which is commensurate with its substantial affluence and resort-based economy. Fremont County has seen the next largest drop with 22.2 percentage points. On average, since 1970, the socioeconomic study area has seen an 11 percentage point drop in net earnings as a percentage of total income. The declines in net earnings as a percentage of total income are consistent with similar national trends that reflect an aging population. As the average age has increased, a greater percentage of the population has entered retirement and left the workforce. In addition, income from dividends, interest, and rent has increased in Wyoming and nationally, as the wealth of upper income and to some extent middle income portions of the population has increased over recent decades.

³ A household includes all the people who occupy a housing unit as their usual place of residence (U.S. Census Bureau 2010a). Note that a household is different from a family, which is defined as a group of two or more people who reside together and who are related by birth, marriage, or adoption.

Table 4-9. Prevalence of Income Sources for Households in the Socioeconomic Study Area

Area	Total Households	With Earnings	With Social Security Income	With Supplemental Security Income	With Public Assistance Income	With Retirement Income
		%	%	%	%	%
Albany	14,193	89.4%	16.3%	2.2%	1.2%	11.9%
Campbell	13,797	92.8%	15.5%	1.7%	1.0%	7.8%
Carbon	6,156	86.4%	25.0%	1.5%	1.7%	12.0%
Converse	5,284	82.7%	26.4%	1.3%	1.0%	16.4%
Crook	2,524	79.4%	34.2%	1.3%	2.7%	19.3%
Fremont	14,489	79.6%	31.1%	3.7%	3.8%	18.7%
Goshen	5,146	76.8%	38.7%	4.1%	4.0%	17.1%
Laramie	33,871	82.7%	26.3%	2.6%	1.2%	21.6%
Lincoln	6,475	83.7%	28.6%	2.2%	0.8%	14.8%
Natrona	27,997	82.7%	26.8%	2.8%	2.2%	14.9%
Niobrara	971	85.9%	32.0%	2.1%	0.2%	11.3%
Park	11,832	79.6%	31.6%	3.3%	2.1%	19.9%
Platte	3,835	76.8%	37.8%	2.3%	2.0%	19.8%
Sublette	2,564	82.3%	27.4%	0.4%	0.0%	18.0%
Sweetwater	15,495	88.2%	20.0%	1.8%	1.1%	15.6%
Teton	7,734	85.8%	16.1%	1.2%	0.0%	7.8%
Uinta	7,251	86.6%	22.9%	2.0%	0.7%	13.8%
Weston	2,917	79.6%	32.0%	1.7%	2.1%	18.4%
Wyoming	208,269	83.4%	26.2%	2.4%	1.6%	16.3%
United States	112,611,029	80.1%	27.1%	3.8%	2.4%	17.4%

Source: U.S. Census Bureau 2009a (2005-2009 American Community Survey).

Table 4-10. Statewide Personal Income by Source (\$1,000s)

Source	1970		1980		1990		2000		2009	
	\$	%	\$	%	\$	%	\$	%	\$	%
Personal income	\$1,305,054	100.0%	\$5,532,918	100.0%	\$8,125,388	100.0%	\$14,463,473	100.0%	\$26,221,601	100.0%
Net earnings	\$989,224	75.8%	\$4,223,735	76.3%	\$5,341,007	65.7%	\$9,022,347	62.4%	\$15,504,367	59.1%
Personal current transfer Receipts	\$102,746	7.9%	\$391,770	7.1%	\$905,474	11.1%	\$1,708,892	11.8%	\$3,357,177	12.8%
Income maintenance	\$6,784	0.5%	\$24,562	0.4%	\$68,094	0.8%	\$121,871	0.8%	\$199,031	0.8%
Unemployment insurance Compensation	\$2,815	0.2%	\$14,311	0.3%	\$22,791	0.3%	\$28,068	0.2%	\$190,861	0.7%
Retirement and other	\$93,147	7.1%	\$352,897	6.4%	\$814,589	10.0%	\$1,558,953	10.8%	\$2,967,285	11.3%
Dividends, interest, and rent	\$213,084	16.3%	\$917,413	16.6%	\$1,878,907	23.1%	\$3,732,234	25.8%	\$7,360,057	28.1%

Source: BEA 1970 - 2009, Table SA30.

Table 4-11. Net Earnings as a Percentage of Total Personal Income, 1970–2008 (\$1,000s)

County		1970		1980		1990		2000		2008	
		\$	%	\$	%	\$	%	\$	%	\$	%
Albany	Personal Income	\$78,598	100.0%	\$266,900	100.0%	\$441,024	100.0%	\$769,966	100.0%	\$1,191,322	100.0%
	Net Earnings	\$58,817	74.8%	\$189,754	71.1%	\$294,779	66.8%	\$471,409	61.2%	\$705,641	59.2%
Campbell	Personal Income	\$45,276	100.0%	\$357,888	100.0%	\$541,525	100.0%	\$957,087	100.0%	\$2,087,459	100.0%
	Net Earnings	\$38,194	84.4%	\$305,705	85.4%	\$425,516	78.6%	\$729,080	76.2%	\$1,659,515	79.5%
Carbon	Personal Income	\$59,025	100.0%	\$299,882	100.0%	\$284,987	100.0%	\$379,793	100.0%	\$665,697	100.0%
	Net Earnings	\$43,852	74.3%	\$242,499	80.9%	\$185,281	65.0%	\$222,205	58.5%	\$412,749	62.0%
Converse	Personal Income	\$23,047	100.0%	\$168,454	100.0%	\$175,379	100.0%	\$316,746	100.0%	\$589,645	100.0%
	Net Earnings	\$16,412	71.2%	\$135,462	80.4%	\$113,061	64.5%	\$210,136	66.3%	\$410,401	69.6%
Crook	Personal Income	\$15,702	100.0%	\$52,160	100.0%	\$95,584	100.0%	\$152,975	100.0%	\$290,141	100.0%
	Net Earnings	\$11,892	75.7%	\$35,642	68.3%	\$61,132	64.0%	\$99,476	65.0%	\$191,240	65.9%
Fremont	Personal Income	\$91,118	100.0%	\$380,787	100.0%	\$462,380	100.0%	\$850,201	100.0%	\$1,424,527	100.0%
	Net Earnings	\$71,714	78.7%	\$291,081	76.4%	\$282,100	61.0%	\$484,893	57.0%	\$804,785	56.5%
Goshen	Personal Income	\$37,999	100.0%	\$111,762	100.0%	\$195,577	100.0%	\$284,684	100.0%	\$430,574	100.0%
	Net Earnings	\$28,656	75.4%	\$71,191	63.7%	\$124,546	63.7%	\$166,130	58.4%	\$233,963	54.3%
Laramie	Personal Income	\$231,007	100.0%	\$788,966	100.0%	\$1,364,804	100.0%	\$2,338,017	100.0%	\$3,915,224	100.0%
	Net Earnings	\$177,126	76.7%	\$591,924	75.0%	\$894,587	65.5%	\$1,501,852	64.2%	\$2,477,610	63.3%
Lincoln	Personal Income	\$35,618	100.0%	\$116,202	100.0%	\$182,719	100.0%	\$350,449	100.0%	\$654,490	100.0%
	Net Earnings	\$28,148	79.0%	\$86,485	74.4%	\$118,878	65.1%	\$213,141	60.8%	\$409,147	62.5%
Natrona	Personal Income	\$237,107	100.0%	\$1,032,291	100.0%	\$1,311,710	100.0%	\$2,299,731	100.0%	\$3,812,496	100.0%
	Net Earnings	\$185,833	78.4%	\$823,845	79.8%	\$874,047	66.6%	\$1,549,339	67.4%	\$2,568,918	67.4%

County		1970		1980		1990		2000		2008	
		\$	%	\$	%	\$	%	\$	%	\$	%
Niobrara	Personal Income	\$11,604	100.0%	\$30,513	100.0%	\$41,986	100.0%	\$62,425	100.0%	\$97,079	100.0%
	Net Earnings	\$8,027	69.2%	\$19,240	63.1%	\$23,102	55.0%	\$33,473	53.6%	\$53,458	55.1%
Plat	Personal Income	\$68,237	100.0%	\$254,907	100.0%	\$390,883	100.0%	\$728,405	100.0%	\$1,265,164	100.0%
	Net Earnings	\$50,457	73.94%	\$178,875	70.17%	\$230,127	58.87%	\$409,358	56.20%	\$665,949	52.64%
Platte	Personal Income	\$24,190	100.0%	\$105,872	100.0%	\$134,335	100.0%	\$229,613	100.0%	\$325,867	100.0%
	Net Earnings	\$16,571	68.5%	\$75,989	71.8%	\$81,839	60.9%	\$137,510	59.9%	\$184,044	56.5%
Sublette	Personal Income	\$16,699	100.0%	\$55,727	100.0%	\$90,917	100.0%	\$172,289	100.0%	\$551,326	100.0%
	Net Earnings	\$13,080	78.3%	\$38,804	69.6%	\$54,014	59.4%	\$96,490	56.0%	\$402,771	73.1%
Sweetwater	Personal Income	\$70,739	100.0%	\$541,684	100.0%	\$708,161	100.0%	\$1,141,414	100.0%	\$1,997,696	100.0%
	Net Earnings	\$54,662	77.3%	\$458,870	84.7%	\$535,618	75.6%	\$812,878	71.2%	\$1,491,918	74.7%
Teton	Personal Income	\$30,235	100.0%	\$139,829	100.0%	\$400,134	100.0%	\$1,199,455	100.0%	\$2,481,104	100.0%
	Net Earnings	\$20,914	69.17%	\$93,777	67.07%	\$239,533	59.86%	\$567,146	47.28%	\$970,070	39.10%
Uinta	Personal Income	\$27,138	100.0%	\$130,211	100.0%	\$274,651	100.0%	\$469,217	100.0%	\$915,540	100.0%
	Net Earnings	\$21,243	78.3%	\$104,591	80.3%	\$215,797	78.6%	\$343,626	73.2%	\$696,679	76.1%
Weston	Personal Income	\$23,566	100.0%	\$78,863	100.0%	\$111,785	100.0%	\$185,517	100.0%	\$299,561	100.0%
	Net Earnings	\$18,299	77.7%	\$57,892	73.4%	\$74,552	66.7%	\$122,791	66.2%	\$197,213	65.8%

Source: BEA 1970 – 2008; Table CA30.

4.4 ECONOMIC BASE

An area's economic base consists of "basic industries" that bring outside income into the local economy. These industries export most or all of their goods and services outside the region, serving economic demand generated by nonlocal businesses and consumers. This economic activity brings new income into the region. Manufacturing and mining are often thought of as basic industries, as they usually export most of their goods outside of their local area and are dependent on nonlocal economic factors. By bringing in outside income, basic industries help support "nonbasic" industries, such as retail trade, housing, construction, and personal services that primarily serve locally generated economic demand. Some industries may be partly basic and partly nonbasic, depending on local conditions. For instance, restaurants are largely nonbasic when they primarily serve local businesses and residents; in other areas, they may be strongly basic if they serve large amounts of tourist-generated demand, thereby bringing outside income into the local economy.

Another way to think of economic base is in terms of specializations in the local economy compared to a larger economy such as the national economy. The specialization of certain geographic areas in certain industries has traditionally been tied to such factors as the natural resource base, transportation and other infrastructure, and cost factors such as labor. In areas with a high proportion of public lands, industries such as mining, grazing, and recreation may be important local economic specializations that bring outside income into the local economy.

Calculation of "location quotients" is one way of assessing an area's economic base or specializations (Florida State University 2010). A location quotient compares an industry's share of total local economic activity to the industry's share in a larger economy, such as the state or nation. The quotient is a ratio, where 1.0 indicates an equal share percentage between the local and larger economies. Location quotients under 1.0 signify a lesser share locally than for the larger economy; figures over 1.0 signify a greater share locally, and thus some degree of specialization of the local economy in that sector compared to the larger economy.⁴ The greater the ratio, the greater the degree of specialization. Location quotients, however, must be interpreted along with data on the size of an industry. An industry could have a very high location quotient but not be especially important locally if it provides only a small amount of an area's jobs or earnings.

Location quotients for employment and earnings for Wyoming are shown in Table 4-12. These quotients are based on a comparison of the state's economy to the national economy.

In Wyoming, the following industries have particularly high location quotients *and* have a large share of employment (over 7 percent): *mining, construction, accommodation and food services, and government and government enterprises*. *Mining* has an especially high location quotient relative to other industries in the state, reflecting the key role of mining as a basic industry in the Wyoming economy. *Construction* is strongly related to the mining industry. *Accommodation and food services* likely reflects the impact of new and temporary workers for the mining industry and the impact of tourism in the state. With respect to *government and government enterprises*, Wyoming is a small state in population terms, and this industry tends to be proportionally larger in smaller populations than in larger populations. In Wyoming, the following industries have high quotients, but have a smaller share of employment (less than 7 percent): *farming; forestry, fishing, and related activities; utilities; transportation and warehousing; and real estate and rental and leasing*. These industries bring meaningful outside income into the local economy, but the relative impact to the local economy is smaller than other industries due to the lower levels of employment for each industry. Note also that while *farming and forestry, fishing, and related activities*

⁴ Put another way, if a ratio of 1.0 indicates the "expected" amount of economic activity based on the profile of the larger economy, the amount of activity that brings the ratio up to 1.0 probably serves local needs, while the amount that increases the ratio beyond 1.0 probably serves nonlocal needs.

have high location quotients for employment, they have substantially lower location quotients for earnings; these statistics reflect a higher degree of part-time employment in these industries compared to others.

Table 4-12. Location Quotients for Employment and Earnings in Wyoming, Relative to the United States, 2008

NAICS Category	Wyoming	
	Employment	Earnings
Private Farm employment/earnings	2.17	0.49
Private Nonfarm employment/earnings	0.98	0.94
Forestry, fishing, and related activities	1.44	0.95
Mining	12.89	11.26
Utilities	1.98	1.62
Construction	1.56	1.61
Manufacturing	0.37	0.33
Wholesale trade	0.69	0.65
Retail trade	0.99	0.92
Transportation and warehousing	1.15	1.49
Information	0.62	0.31
Finance and insurance	0.69	0.33
Real estate and rental and leasing	1.09	0.91
Professional, scientific, and technical services	0.65	0.43
Management of companies and enterprises	0.23	0.20
Administrative and waste services	0.54	0.44
Educational services	0.37	0.23
Health care and social assistance	0.69	0.63
Arts, entertainment, and recreation	0.79	0.86
Accommodation and food services	1.25	1.24
Other services, except public administration	0.83	0.84
Government and government enterprises	1.31	1.20
Federal, civilian	1.19	1.05
Military	1.33	1.14
State and local	1.32	1.24
State government	1.28	1.25
Local government	1.34	1.24

Source: BEA 2008; Table SA25N and Table SA05N.

The Location Quotient (LQ) is calculated as $LQ = (e_i/e)/(E_i/E)$, where e_i is equal to the local measure (i.e., employment or earnings) in industry i , e is equal to the total local measure, E_i is equal to the reference area measure in industry i , and E is equal to the total reference area measure.

4.5 SPECIFIC ECONOMIC SECTORS

This section discusses in greater detail the economic sectors that are the most relevant to (and potentially affected by) the decisions that will be addressed in the RMP and LRMP amendments in the BLM and

USFS planning actions. These most relevant sectors are agriculture, mining, renewable energy, and tourism and recreation.

4.5.1 Agriculture

Table 4-13 provides basic statistics on agriculture in the socioeconomic study area. The study area contains the top seven agricultural counties in the state. With respect to the livestock industry in particular, the following study area counties have over \$100 million in livestock inventory value: Carbon, Fremont, Goshen, Laramie, and Platte.

Table 4-13. Farms, Land in Farms, and Agricultural Value

County	No. of Farms ¹	Land in Farms ¹	Total Public Land ²	Land Assessed as Agricultural Use ²	Value of Livestock Inventory ³	Value of Crop Production ³	Total Value ³	Rank Among Wyoming Counties by Total Value ³
		1,000 Acres	1,000 Acres	1,000 Acres	Million Dollars	Million Dollars	Million Dollars	
Albany	448	1,856.1	925.7	1,678.0	63.2	7.0	70.2	14
Campbell	633	2,345.9	559.7	2,231.4	94.9	9.1	104.0	7
Carbon	287	2,172.5	3,098.3	1,915.8	103.0	12.1	115.1	5
Converse	435	2,366.0	653.2	1,922.9	72.5	8.8	81.3	11
Crook	457	1,569.9	467.1	1,359.4	81.3	15.9	97.2	10
Fremont	1,394	1,800.5	5,108.1	734.4	117.1	32.4	149.5	3
Goshen	815	1,368.3	130.7	1,269.9	130.3	48.0	178.3	1
Laramie	844	1,691.6	189.2	1,380.7	118.3	32.0	150.3	2
Lincoln	535	342.6	2,030.3	505.7	53.2	13.8	67.0	16
Natrona	413	2,181.5	1,864.4	1,294.9	70.2	7.0	77.2	12
Niobrara	235	1,449.1	295.7	1,352.4	59.9	6.2	66.1	18
Park	782	881.7	3,678.8	666.0	70.4	41.7	112.1	6
Platte	487	1,308.2	312.5	1,004.8	109.2	21.6	130.8	4
Sublette	366	599.3	2,568.7	542.4	60.5	9.0	69.5	15
Sweetwater	244	1,486.4	4,907.5	1,713.8	24.8	5.6	30.4	22
Teton	180	52.9	2,625.0	37.0	5.2	2.0	7.2	23
Uinta	344	742.8	580.3	716.6	58.6	7.8	66.4	17
Weston	237	1,328.3	432.1	1,042.6	52.5	4.6	57.1	20
Study Area	9,136	25,543.6	30,427.3	21,368.7	1,345.1	284.6	1,629.7	NA
Wyoming	11,069	30,169.3	35,670.6	24,976.4	1,632.5	371.3	2,003.8	NA

NA: Not applicable.

¹ 2007 Census of Agriculture.

² From "The Equality State Almanac" (Wyoming Economic Analysis Division 2010a).

³ 2011 data from the National Agricultural Statistical Service.

Source: U.S. Department of Agriculture, National Agricultural Statistical Service, Wyoming Field Office, Wyoming Agricultural Statistics 2011, p. 30.

Table 4-14 shows trends in cattle production. Each of the counties, and the state as a whole, has seen some variation in production between 2004 and 2011. However, changes have neither been especially large, nor is there a consistent trend across the counties. Sheep production has also been variable, as shown in

Table 4-15, with a clear downward trend in production in several counties and across the state in the last few years.

Table 4-14. Total Cattle and Calves, January 1, 2004–2011

County	2004	2005	2006	2007	2008	2009	2010	2011
Albany	55,000	51,000	50,000	48,000	53,000	55,000	54,000	53,000
Campbell	80,000	80,000	84,000	86,000	77,000	79,000	77,000	76,000
Carbon	90,000	90,000	98,000	97,000	87,000	90,000	88,000	86,000
Converse	60,000	60,000	64,000	60,000	52,000	54,000	52,000	52,000
Crook	65,000	60,000	61,000	62,000	68,000	70,000	68,000	67,000
Fremont	90,000	85,000	80,000	80,000	97,000	100,000	97,000	96,000
Goshen	120,000	110,000	129,000	130,000	110,000	115,000	110,000	110,000
Laramie	60,000	60,000	71,000	70,000	83,000	86,000	84,000	83,000
Lincoln	39,000	40,000	44,000	42,000	36,000	37,000	36,000	35,500
Natrona	60,000	60,000	62,000	60,000	55,000	56,000	55,000	54,000
Niobrara	60,000	60,000	65,000	70,000	51,000	52,000	51,000	50,000
Park	50,000	45,000	50,000	50,000	56,000	57,000	57,000	56,000
Platte	100,000	110,000	116,000	115,000	88,000	91,000	91,000	88,000
Sublette	60,000	60,000	63,000	64,000	51,000	52,000	51,000	50,000
Sweetwater	15,000	14,000	15,000	15,000	19,300	19,900	19,500	19,100
Teton	9,000	7,000	7,000	6,000	4,700	4,600	4,500	4,400
Uinta	42,000	38,000	41,000	43,000	44,500	45,000	45,000	44,000
Weston	50,000	44,000	47,000	47,000	44,500	44,500	44,500	44,000
Study Area	1,105,000	1,074,000	1,147,000	1,145,000	1,077,000	1,108,000	1,084,500	1,068,000
Wyoming	1,350,000	1,300,000	1,400,000	1,400,000	1,310,000	1,350,000	1,320,000	1,300,000

Note: Beginning in 2008, estimates were revised based on new estimation process.

Source: U.S. Department of Agriculture, National Agricultural Statistical Service, Wyoming Field Office, Wyoming Agricultural Statistics 2011, p. 47.

Table 4-15. Total Sheep and Lambs, January 1, 2004–2011

County	2004	2005	2006	2007	2008	2009	2010	2011
Albany	3,300	3,500	3,400	2,500	NA	NA	2,900	2,900
Campbell	36,000	36,500	31,000	27,000	33,000	32,000	29,000	28,000
Carbon	13,600	14,500	19,400	17,000	9,300	9,200	8,200	8,000
Converse	35,000	68,000	72,800	68,000	70,000	69,000	62,000	60,000
Crook	14,500	23,000	21,000	19,000	14,000	13,900	12,300	12,200
Fremont	40,000	40,000	42,800	34,500	23,000	23,000	21,000	20,000
Goshen	2,500	3,000	3,000	4,000	2,300	2,300	2,100	2,000
Laramie	19,500	18,500	24,000	21,500	17,600	17,400	15,400	15,000
Lincoln	32,800	40,500	36,000	37,000	45,000	44,000	39,000	38,000
Natrona	23,300	24,500	20,100	18,500	41,000	40,000	36,000	35,000
Niobrara	6,700	6,000	6,100	5,000	5,300	5,300	4,700	4,600
Park	23,500	18,500	11,000	13,000	7,800	7,700	6,800	6,700

County	2004	2005	2006	2007	2008	2009	2010	2011
Platte	500	500	1,100	1,000	400	400	300	300
Sublette	13,200	10,500	12,200	15,000	N/A	N/A	N/A	N/A
Sweetwater	11,100	10,000	10,100	9,000	N/A	N/A	N/A	N/A
Teton	400	500	700	500	N/A	N/A	300	300
Uinta	43,600	44,500	46,100	45,000	42,000	43,000	37,000	36,500
Weston	2,700	2,500	6,400	5,000	3,200	3,200	2,900	2,800
Study Area	322,200	365,000	367,200	342,500	313,900	310,400	279,900	272,300
Wyoming	430,000	445,000	450,000	440,000	425,000	420,000	375,000	365,000

N/A: Not available.

Note: Beginning in 2008, estimates were revised based on new estimation process.

Source: U.S. Department of Agriculture, National Agricultural Statistical Service, Wyoming Field Office, Wyoming Agricultural Statistics 2011, p. 60.

4.5.2 Mining

The Wyoming mining industry is largely dominated by oil, gas, and coal—and to a lesser extent bentonite, sand and gravel, trona, and uranium. Table 4-16 provides the taxable value of mineral production in Wyoming between 2004 and 2010. Oil and natural gas taxable production value has risen substantially during that period, while coal and trona have also seen significant increases.

Total taxable valuation of mineral production dropped from \$20.4 billion in 2008 to \$12.6 billion in 2009, reflecting changes in demand and value due to the recession. In 2010, taxable valuation rebounded somewhat to \$15.5 billion (Wyoming Department of Revenue, 2011).

Table 4-17 and Table 4-18 show oil and gas production volumes between 2000 and 2011 for the counties in the socioeconomic study area. There are several points and trends worth noting here. The socioeconomic study area provides most of the oil and gas produced in Wyoming. Gas production across the study area and the state has increased substantially since 2000. Sublette County has by far the largest volume of gas production in 2011 of all counties in the study area and state, and showed enormous growth (more than doubling) between 2000 and 2011. Sweetwater, Fremont, Campbell, and Uinta counties are the next largest gas producers; production has seen some increases and decreases in these counties over the period shown. Comparatively, oil production in the study area and state has been relatively steady through this period. No one county stands out as being way ahead of others in oil production. The following counties have 2011 production levels of over 5 million barrels: Campbell, Natrona, Park, Sublette, and Sweetwater. Of these counties, production over the period shown has declined considerably in Campbell County and somewhat in Park County, increased somewhat in Natrona County, and increased considerably in Sublette and Sweetwater counties.

Figure 4-2 shows graphically the total mineral valuation in 2010 by county. This figure shows the dominance of Campbell, Sublette, and Sweetwater counties in the minerals economy of Wyoming. All three of these counties are in the socioeconomic study area. Campbell County's mineral valuation is dominated by coal and oil production. Sublette County's mineral valuation is dominated by gas and oil production. Sweetwater County's mineral valuation is dominated by gas, oil, trona, and coal production.

Table 4-16. Taxable Valuation of Mineral Production, Wyoming, 2004–2010 (\$Millions)

Mineral Type	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Oil	\$1,634.1	\$2,152.8	\$2,533.1	\$2,843.2	\$4,089.3	\$2,439.7	\$3,272.8
Natural Gas	\$7,039.1	\$10,134.2	\$8,770.2	\$7,271.3	\$12,003.5	\$5,861.1	\$7,601.4
Coal	\$2,039.1	\$2,280.1	\$2,884.9	\$3,279.5	\$3,760.5	\$3,834.5	\$4,108.4
Bentonite	\$38.2	\$43.3	\$45.2	\$48.6	\$58.1	\$33.9	\$64.2
Sand and Gravel	\$14.6	\$18.3	\$25.0	\$28.3	\$30.9	\$26.1	\$22.9
Trona	\$198.9	\$255.2	\$299.2	\$339.7	\$427.2	\$350.8	\$376.0
Uranium	\$9.3	\$12.3	\$17.0	\$19.9	\$11.4	\$22.7	\$32.7
All Other Minerals	\$10.3	\$10.1	\$11.7	\$14.8	\$16.1	\$15.1	\$15.1
Total	\$10,984.0	\$14,906.4	\$14,586.4	\$13,845.4	\$20,396.9	\$12,583.9	\$15,493.5

Source: Wyoming Department of Revenue 2011 Annual Report.

Table 4-17. Gas Production by County, 2000–2011 (MCF)

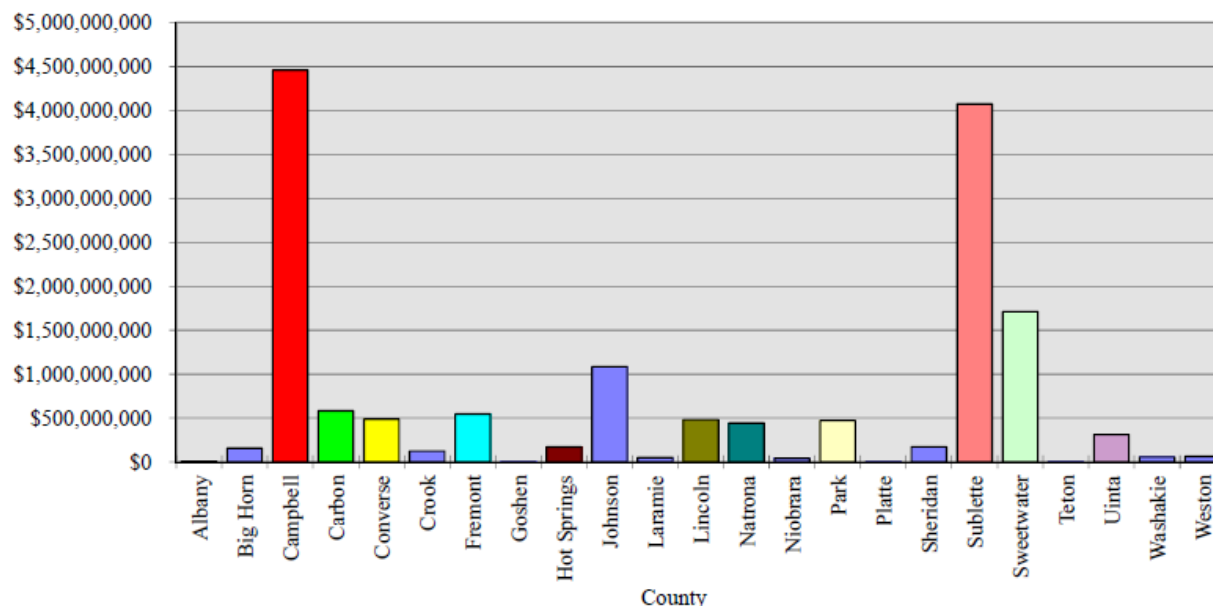
County	2000	2002	2004	2006	2008	2009	2010	2011
Albany	13,598	9,646	8,000	6,595	6,323	6,531	5,199	7,117
Campbell	178,933,289	314,134,768	284,662,665	216,337,364	166,826,646	142,221,104	141,445,871	136,016,245
Carbon	103,463,738	98,278,472	97,344,366	110,913,451	121,339,856	129,970,886	125,196,960	107,957,862
Converse	22,349,475	24,213,709	17,919,343	11,163,827	8,884,008	8,374,842	7,796,484	8,966,972
Crook	91,468	130,387	94,004	59,220	42,025	42,162	43,219	42,754
Fremont	133,886,976	153,914,149	196,122,118	198,137,736	142,013,802	164,074,285	157,359,039	170,826,435
Goshen	0	0	0	0	0	0	0	12,687
Laramie	292,321	149,013	128,739	138,172	97,005	100,918	210,934	633,561
Lincoln	99,151,194	86,752,866	81,391,972	85,741,567	89,774,994	83,875,812	78,362,895	67,595,370
Natrona	62,407,233	38,783,582	43,641,046	34,443,734	28,667,052	29,017,477	24,179,892	18,641,956
Niobrara	331,063	325,551	280,427	1,730,079	1,913,328	2,075,857	1,676,491	1,303,098
Park	10,951,319	12,915,426	14,950,291	16,004,874	13,713,716	11,213,116	11,266,815	10,180,150
Platte	0	0	0	0	0	0	0	3,092
Sublette	448,281,668	571,005,612	731,278,904	880,446,841	1,145,821,607	1,195,721,744	1,198,120,727	1,132,032,489
Sweetwater	233,453,423	229,597,363	233,500,641	237,821,949	241,447,926	231,472,264	244,983,641	246,813,957
Uinta	195,116,690	170,507,572	151,313,197	137,449,416	127,080,442	107,947,769	118,712,239	106,152,762
Weston	1,885,084	2,063,940	2,098,414	1,948,759	1,692,372	1,861,708	1,951,777	1,745,468
Study Area	1,490,608,539	1,702,782,056	1,854,734,127	1,932,343,584	2,089,321,102	2,107,976,475	2,111,312,183	2,008,931,975
Wyoming	1,505,002,627	1,749,584,75	1,929,187,013	2,115,079,597	2,477,970,352	2,542,319,609	2,526,390,664	2,375,575,017

Source: Wyoming Oil and Gas Conservation Commission (2012).

Table 4-18. Oil Production by County, 2000–2011 (Barrels)

County	2000	2002	2004	2006	2008	2009	2010	2011
Albany	76,003	75,694	79,205	67,445	50,100	54,239	60,999	64,534
Campbell	13,497,921	10,864,752	9,493,433	9,281,151	7,861,588	7,509,732	8,001,130	8,575,001
Carbon	1,643,539	1,714,621	1,749,339	1,783,961	1,719,265	1,801,217	1,597,049	1,340,726
Converse	2,991,155	2,226,708	2,014,414	1,903,636	1,815,917	1,894,918	2,398,730	3,535,429
Crook	2,320,714	2,108,333	1,740,759	1,640,306	1,502,038	1,533,938	1,585,362	1,541,777
Fremont	3,285,023	3,128,768	3,086,405	3,044,602	3,177,300	3,237,571	3,930,596	4,064,537
Goshen	194	383	46	0	0	0	0	6,088
Laramie	387,668	362,397	280,291	273,270	474,063	345,931	599,920	840,500
Lincoln	988,154	828,145	751,642	782,327	825,984	817,685	711,884	585,398
Natrona	3,561,186	3,456,637	3,198,036	3,705,900	4,332,408	4,622,435	5,299,985	5,229,343
Niobrara	446,364	447,252	452,330	571,124	493,107	516,286	573,978	693,442
Park	8,802,892	8,407,901	8,410,373	8,402,498	8,015,969	7,449,766	7,196,898	6,977,507
Platte	0	0	0	0	0	0	0	2,868
Sublette	3,345,063	4,378,710	4,823,833	5,770,042	7,673,864	7,962,065	7,621,104	7,324,675
Sweetwater	4,429,736	4,474,724	4,520,691	5,295,539	5,472,924	5,234,350	7,466,744	7,736,947
Uinta	4,437,208	3,079,892	2,601,731	1,911,747	1,338,800	1,120,845	1,100,583	982,716
Weston	1,106,189	1,220,091	1,198,263	1,155,679	995,091	909,558	838,192	768,434
Study Area	51,319,009	46,775,008	44,400,791	45,589,227	45,748,418	45,010,536	48,983,154	50,269,922
Wyoming	60,765,977	54,801,275	52,058,379	52,976,263	53,068,479	51,564,966	55,303,056	56,235,522

Source: Wyoming Oil and Gas Conservation Commission (2012).

Figure 4-2. Total Mineral Taxable Valuation by County, 2010

Source: Wyoming Department of Revenue 2010-2011 Annual Report

The mining industry plays a central role in the economy of the socioeconomic study area. As noted in section 4.4, it is a basic industry that generates a disproportional amount of employment and earnings. This role of mining is also true for the state as a whole. Furthermore, mineral production from the socioeconomic study area generates large amounts of revenue for the state. A portion of this revenue is returned to local governments in the socioeconomic study area. Section 4.6 provides considerable detail on government revenues that the mining industry generates.

A dominant mining industry has both benefits and consequences. The benefit of a large mining industry is a substantial revenue stream derived from an “exportable” tax burden. Wyoming’s tax burden is second only to Alaska; however, due to “Wyoming’s vast mineral deposits, the taxpayers in the state have been able to shift a significant portion of the state and local spending burden to residents of other states” through a substantial severance tax that represents 43.3 percent of total tax collections (Wyoming Heritage Foundation, 2010). Subsequently, Wyoming’s rapid growth in severance taxes since 2000 has allowed the state to significantly increase spending on education, public welfare, highways, and natural resources (Wyoming Heritage Foundation, 2010).

Furthermore, property owners benefit by granting access to private minerals and surface land and obtaining mineral royalties and lease payments in return. One study estimated that 82 percent of these payments to Wyoming residents are spent in the Wyoming economy, amounting to \$183.8 million of additional spending or economic activity within the state per year, or a total of \$238.1 million when “downstream” impacts of the additional spending are included (Wyoming Heritage Foundation 2008).

On the other hand, a highly specialized mining economy is subject to the volatility of energy and other mineral markets. Anticipating spending levels is much more difficult when revenues are largely dependent on taxes based on mineral production since the level of these tax collections is highly dependent on the overall economy’s influence on energy demand and the strength or weakness of the dollar. As suggested by a 2010 Wyoming Heritage Foundation report, “a weak dollar tends to produce higher severance tax collections...due to the fact that a weaker U.S. dollar makes U.S. goods cheaper abroad and thus pushes up the prices of U.S. goods, especially energy commodities.” For this reason, the Wyoming economy is much more susceptible to national and global economic changes. For example, “a

ten percent increase in the value of the dollar would reduce severance tax collections by \$185 million” (Wyoming Heritage Foundation 2010).

The oil and gas industry is the most significant of the mining industries throughout the state. Table 4-19 provides a detailed look at the economic contribution of oil and gas activities in the state, from a study conducted in 2008 using 2007 data and the IMPLAN economic impact model (Wyoming Heritage Foundation 2008). Oil and gas activities contribute directly to the economy in both the development and extraction (production) phases. Additionally, oil and gas development and extraction produce indirect and induced economic impacts (from the interindustry transactions to support the direct activity, and respending of household income, respectively, resulting from the direct economic activity). Furthermore, extraction taxes and private mineral royalty and lease payments provide additional economic contributions, to the extent these tax revenues and private payments accrue within Wyoming.

Table 4-19 shows economic output, employment, and earnings from direct, indirect, and induced economic activity attributable to oil and gas development and extraction in Wyoming in 2007, and also presents employment and earnings multipliers. Multipliers show the relationships between direct and total economic activity (which includes the indirect and induced activity). Note that the multipliers include the direct impacts. Thus these figures should be read as follows, using the 2.86 employment multiplier for extraction as an example: For every job directly created due to oil and gas activity, 1.86 jobs are created elsewhere in the economy. The same can be said of the 1.75 multiplier for earnings: for every dollar earned from direct oil and gas activities, \$0.75 is earned elsewhere in the economy. It is important to note that for the impacts analysis phase, different multipliers will be derived from current IMPLAN model data for the current planning action study area or sub-areas. The figures for total economic contribution in Table 4-19 include the impacts of the respending of extraction taxes and private mineral royalty and lease payments. This additional activity is often not included in economic impact studies, thus the multipliers for total economic contribution may appear larger than those derived in other studies.

Table 4-20 provides a look at the relative importance of the oil and gas industry to Wyoming, including the downstream impacts, from the same Wyoming Heritage Foundation report (2008) discussed above. According to that study, oil and gas activities within Wyoming in 2007 accounted for an estimated 32 percent of the state’s total economic output or gross revenues, 20 percent of employment, 25 percent of total earnings, and 43 percent of Gross State Product. Furthermore, oil and gas accounted for 75 percent of severance taxes, 78 percent of mineral ad valorem levies, 55 percent of federal mineral royalties, and 65 percent of state mineral royalty revenues.

What this data suggests is that a vibrant mining industry in Wyoming has numerous benefits throughout the state and is responsible for a substantial share of private income, government revenue, and private and public spending. However, Wyoming’s economy is also more susceptible to national and global economic conditions that affect the demand for minerals, particularly energy minerals.

Table 4-19. Total Economic Contribution for Oil and Gas Activities in Wyoming, 2007*

Type of Impact	Drilling, Completion, and Re Completions	Extraction	Private Mineral Royalty and Lease Payments ¹	Extraction Taxes ²	Total Economic Contribution
Total Economic Output	3,513,052,106	\$11,963,561,646	\$231,827,774	\$2,908,623,519	\$18,617,065,044
Total Employment	26,701	11,765	1,447	33,316	73,229
Total Labor Earning	\$1,458,093,669	\$736,813,207	\$42,461,473	\$1,677,264,966	\$3,914,633,314
Earnings Per Worker	\$54,608	\$62,628	\$29,344	\$50,344	\$53,457
Employment Multiplier	1.67	2.86	NA	NA	3.65
Earnings Multiplier	1.32	1.75	NA	NA	2.75
Source: Wyoming Heritage Foundation 2008.					

* These figures encompass direct, indirect, and induced economic impacts. Figures are in 2007 dollars.

1. These payments to households and companies are treated as all secondary induced impacts, that is, these payments are considered income of which a portion is spent in the economy.

2. These tax payments to state and local governments are treated as all secondary indirect impacts, that is, these payments are considered downstream beneficiaries of oil and gas activities.

Table 4-20. Oil and Gas Activity as a Fraction of Wyoming's Economy, 2007*

Indicator	All Oil and Gas Activities in Wyoming	All Economic Activity in Wyoming	Percent of Oil and Gas to State	Source
Total Economic Output	\$18,617,065,044	\$58,831,050,621	31.60%	IMPLAN 2006
Total Employment	73,229	369,565 ³	19.80%	IMPLAN 2006
Total Labor Earnings	\$3,914,633,314	\$15,487,363,835	25.30%	IMPLAN 2006
Average Earnings	\$53,457	\$41,907	127.60%	IMPLAN 2006
Gross State Product (i.e. value added)	\$13,329,075,050	\$31,205,616,410	42.70%	IMPLAN 2006
Severance Tax	\$666,397,115	\$882,383,479	75.50%	WY Department of Revenue Annual Report 2007
Mineral Ad Valorem Levies	\$712,637,118	\$913,011,683	78.10%	WY Department of Revenue Annual Report 2007
Assessed Valuation (Taxable Value) ¹	\$11,303,378,284	\$21,491,267,438	52.60%	WY Department of Revenue Annual Report 2007
Federal Mineral Royalties (WY Disbursements, 50%) ²	\$515,500,646	\$931,394,926	55.30%	Minerals Management Service, 2007
State Mineral Royalties	\$90,031,996	\$138,201,502	65.10%	Wyoming Office of State Lands and Investments 2007
Sales and Use Taxes	\$50,344,215	\$906,973,329	5.50%	Wyoming Depart of Revenue Annual Report 2007
Source: Wyoming Heritage Foundation 2008.				

* These figures encompass direct, indirect, and induced economic impacts. Figures are in 2007 dollars.

1. The assessed valuation, severance taxes, and ad valorem taxes are based on 2006 production. Severance and ad valorem taxes are paid to the state in 2007.

2. This estimate is from the U.S. Minerals Management Service (MMS), and it includes federal mineral royalties from carbon dioxide, coalbed methane, condensate, gas plant products, oil, processed and unprocessed gas, and royalties associated with rents, bonuses, and other revenues. Fifty percent of royalties return to Wyoming and 50 percent accrue to the federal government (U.S. Minerals Management Services, <http://www.mrm.mms.gov/Stats/pdfdocs/formulas.pdf>). Native American royalties are not included in this estimate, and therefore, the receipts paid to reservations are not captured in this analysis.

3. This employment figure is from IMPLAN, whose estimates are derived from BEA data. This includes full-time, part-time, self-employed, small business owners, and farm employment. The Wyoming Department of Employment figures are lower than those reported here (May 2007 labor force estimate is 285,553), as they do not include farm employment, self-employed, and small business owners (Wyoming Department of Employment Labor Trends, Volume 45, No. 7, July, 2008). The Bureau of Economic Statistics estimates that Wyoming had 85,987 self-employed (proprietor) jobs in 2006.

4.5.3 Renewable Energy

Wyoming's renewable energy industry consists mostly of wind energy and hydroelectricity, with some geothermal energy. The current BLM and USFS planning effort may have implications for wind energy development, but is unlikely to impact hydroelectric power generation.

Wyoming has long been recognized as an ideal location for wind energy development. The southern portion of the state, which includes the socioeconomic study area, is especially suited for wind development, with ample land area and consistent, high winds. Furthermore, wind energy has benefitted the Wyoming economy in that the state exports large amounts of wind energy to Colorado, Oregon, and Utah.

Wind energy generation in Wyoming has seen strong growth—from 617 megawatt hours in 2004 to 3,247 megawatt hours in 2010—as shown in Table 4-21. Table 4-22 details the 2010 capacity and generation of renewable energy throughout the state. Wind accounted for 17.9 percent of all electrical energy generation capacity in the state in 2010 and provided 6.7 percent of the electricity generated in that year. Most of the wind energy capacity in Wyoming is located within the planning area.

Table 4-21. Wyoming Wind Energy Generation, 2004–2010

Energy Source	Generation in Thousands of Megawatt Hours						
	2004	2005	2006	2007	2008	2009	2010
Wind	617	717	759	755	963	2,226	3,247

Source: U.S. EIA 2012a.

Table 4-22. Wyoming Renewable Electric Power Industry Statistics, 2010

Capacity/Generation	Value	Percent of State Total
Capacity (megawatts)		
Total Existing Summer Electricity Capacity	7,896	100.0
Total Existing Summer Renewable Capacity	1,722	21.8
Hydro Conventional	307	3.9
Wind	1,415	17.9
Generation (thousand megawatt hours)		
Total Electricity Net Generation	48,119	100.0
Total Renewable Net Generation	4,271	8.9
Hydro Conventional	1,024	2.1
Wind	3,247	6.7

Source: U.S. EIA 2012a; U.S. EIA 2012a.

Wind energy development and production benefit local economies. Local landowners and residents benefit by opening up their land to wind developers, generating revenue through property taxes, sales taxes, and royalty payments to landowners.

4.5.4 Tourism and Recreation

Tourism and recreation are important to the Wyoming economy. According to the *Wyoming Office of Tourism 2011 Year in Review*, travelers in Wyoming enjoyed 8.3 million overnight stays resulting in

\$2.88 billion in direct expenditures. The tourism industry supported 29,810 jobs, which account for almost 7.5 percent of Wyoming's total employment. Travel and tourism generated \$729 million in payroll income in Wyoming in 2010. Local and state tax receipts from tourism-generated spending increased from \$57 million in 1997 to \$118 million in 2010—a 5.3 percent growth rate, per year, over the 14 years (Wyoming Office of Tourism 2012).

Within the study area, tourism and recreation make important contributions to the local economy and to local government revenues. According to an economic impact study prepared for the Wyoming Office of Tourism (2012), travelers spent \$2.7 billion in the study area in 2011. This spending supported \$674 million in direct earnings and 27,200 jobs. This spending also generated \$48 million in local tax receipts and \$63 million in state tax receipts. These figures do not include additional earnings, jobs, and tax receipts generated through the multiplier effect of the respending of earnings within the local economy. A breakdown of these figures by county is provided in Table 4-23.

Table 4-23. Direct Economic Impacts of Traveler Spending in the Study Area, 2011

County	Travel Spending (\$Million)	Direct Earnings (\$Million)	Direct Employment (Jobs)	Tax Receipts*		
				Local (\$Million)	State (\$Million)	Total (\$Million)
Albany	\$167.3	\$29.3	1,630	\$2.6	\$4.5	\$7.1
Campbell	\$108.3	\$26.0	1,120	\$1.8	\$2.6	\$4.3
Carbon	\$152.3	\$29.3	1,210	\$2.5	\$4.0	\$6.4
Converse	\$45.5	\$12.0	560	\$0.8	\$1.1	\$1.9
Crook	\$27.4	\$6.3	310	\$0.3	\$0.7	\$1.0
Fremont	\$137.7	\$41.9	1,560	\$1.4	\$3.2	\$4.6
Goshen	\$28.1	\$4.3	280	\$0.3	\$0.7	\$1.1
Laramie	\$333.2	\$60.7	3,110	\$5.9	\$8.6	\$14.5
Lincoln	\$70.7	\$15.4	710	\$0.6	\$2.0	\$2.6
Natrona	\$284.2	\$67.5	2,600	\$4.2	\$6.9	\$11.1
Niobrara	\$10.3	\$3.6	150	\$0.2	\$0.2	\$0.5
Park	\$284.3	\$76.2	3,430	\$3.7	\$5.6	\$9.3
Platte	\$40.5	\$10.0	510	\$0.4	\$0.9	\$1.3
Sublette	\$44.3	\$14.0	430	\$0.5	\$1.0	\$1.5
Sweetwater	\$178.7	\$38.1	1,770	\$2.9	\$4.6	\$7.5
Teton	\$694.2	\$220.5	6,920	\$18.8	\$13.5	\$32.3
Uinta	\$94.7	\$16.3	730	\$1.1	\$2.8	\$3.9
Weston	\$15.5	\$2.8	160	\$0.2	\$0.4	\$0.6
Study Area	\$2,717.2	\$674.2	27,190	\$48.2	\$63.3	\$111.5
State Total	\$2,938.1	\$731.0	29,860	\$52.0	\$68.4	\$120.4

*Local: Tax receipts collected by counties and municipalities, as levied on applicable travel-related purchases. Consists of local option lodging taxes, local sales taxes and other local use taxes. The local share (31 percent) of state sales taxes is included. Property taxes are not included. State: State sales taxes (including tax receipts distributed to local governments) and gasoline taxes attributable to travel expenditures. Only the state share (69 percent) of state sales taxes is included.
Source: Wyoming Travel and Tourism 2012.

In terms of outdoor recreation, specifically hunting and fishing, a 2006 study by the Sonoran Institute and the Theodore Roosevelt Conservation Partnership showed the following:

- Total annual expenditures from hunting and fishing in Wyoming exceeded \$335 million.

- Anglers accounted for \$212 million in total annual expenditures (34 percent equipment, 45 percent trip-related, 21 percent other).
- Hunters accounted for \$123 million in total annual expenditures (29 percent equipment, 58 percent trip-related, 14 percent other).
- Hunters in Wyoming spent 74 percent of their hunting days (960,000 days) on public lands.

A growing component of recreation on BLM and USFS public lands and across the state is OHV use. Since January 2002, users of “off-road vehicles” (ORV, a largely synonymous term with OHV) in Wyoming have been required to purchase a \$15.00 yearly permit to use ORV-designated trails enrolled in the Wyoming State Trails Program. A permit or a license plate is required to use roads and travel routes designated by land managers for ORV travel and enrolled in the program. According to the Wyoming State Trails Program (2012a), the state-wide status of roads and trails enrollment is as follows:

The USFS alone [has] enrolled over 8,000 miles of roads in the program along with about 425 miles of trails, about 92 miles which are single-track trails for motorcycles—each year riding areas are improved and new opportunities are added. The BLM has enrolled 100% of their existing roads and trails which are estimated to be in excess of 40,000 miles. Additionally, 100% of existing roads and trails on State Trust lands and Game & Fish lands were also enrolled.

The Wyoming State Trails Program and the ORV permit program are administered by the Wyoming Department of State Parks and Cultural Resources. The revenue generated is used by the program to develop, maintain, and manage ORV trails.

The increase in ORV permits sold since 2002 indicates a dramatic rise in ORV use throughout the socioeconomic study area (Table 4-24).⁵ As a whole, Wyoming issued 6,767 ORV permits in 2002 and 54,177 permits in 2011, an 801 percent increase. Within the socioeconomic study area, 5,060 permits were issued in 2002 and 40,579 permits were issued in 2011, an 802 percent increase. Sweetwater County (4,675 permits) issued the most permits in 2011, suggesting the highest rate of ORV usage. Niobrara County issued the fewest permits (55) in 2011. The number of out-of-state, agent-issued permits for Wyoming increased from 11 permits in 2002 to 3,301 permits in 2011, suggesting increased interest in ORV usage from out-of-state residents. Of note, the number of permits issued in the study area, study area counties, and the state peaked in 2009 or 2010, with slight declines in 2011. Whether ORV permits have plateaued or will again increase is not clear.

It is important to note that non-recreational use of ORVs is significant in Wyoming. Agriculture and the oil and gas industry in particular use ORVs to access remote facilities and the backcountry. Also, the general category of ORVs may include multi-purpose vehicles that can be operated on many public highways.

Table 4-24. ORV Permits Sold in Socioeconomic Study Area, 2002–2011

County	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Albany	834	1,912	2,722	3,574	4,031	4,586	5,674	5,013	4,231	4,074
Campbell	431	1,322	2,006	2,300	2,758	3,331	3,653	4,154	4,328	3,960
Carbon	359	1,253	1,458	1,818	1,786	2,007	2,020	2,580	2,609	2,375
Converse	NA	339	553	579	1,714	1,774	864	915	905	880
Crook	47	266	216	213	341	413	447	487	500	655
Fremont	705	2,430	3,024	3,654	4,408	4,867	4,965	4,816	4,861	4,584
Goshen	NA	118	174	193	239	264	310	305	325	329

⁵ The growth in permit numbers is probably due to both increased OHV use and to increased compliance with the permit requirement. The portion of growth attributable to each factor is not known.

County	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Laramie	602	1,661	2,142	2,767	2,786	3,095	1,806	1,929	3,071	1,808
Lincoln	342	1,705	1,634	2,138	2,403	2,929	3,763	3,987	4,258	3,782
Natrona	607	2,071	2,586	2,920	3,344	3,964	4,161	4,316	4,316	4,388
Niobrara	NA	NA	NA	NA	NA	NA	43	48	43	55
Park	236	1,416	1,674	1,952	2,251	2,716	2,478	2,661	2,795	2,647
Platte	115	342	438	510	602	717	653	664	709	696
Sublette	145	682	808	1,074	1,009	1,318	1,389	1,514	1,540	1,552
Sweetwater	393	1,904	2,453	3,009	3,575	4,318	4,533	4,668	4,715	4,675
Teton	87	615	858	1,141	1,466	1,637	1,407	1,548	1,455	1,435
Uinta	137	1,111	1,571	1,905	2,253	2,659	2,553	2,602	2,557	2,317
Weston	20	250	221	309	256	431	465	487	480	367
Study Area	5,060	19,397	24,538	30,056	35,222	41,026	41,184	42,694	43,698	40,579
Wyoming (In-State)	6,756	24,895	30,675	37,063	43,163	49,744	49,959	52,495	53,509	50,876
Out of State Agents	11	1,572	1,718	2,153	1,848	2,199	2,367	2,565	2,859	3,301
Grand Total	6,767	26,467	32,393	39,216	45,011	51,943	52,326	55,060	56,368	54,177

Source: Wyoming State Trails Program 2012b.

4.6 PUBLIC FINANCE

Lands and federal mineral estate managed within the socioeconomic study area affect local, county, state, and federal government budgets based on revenues from mineral royalties, taxes, payments in lieu of taxes (PILT), fees, and other funding sources. Likewise, lands and federal mineral estate in the socioeconomic study area result in government expenditures for management, law enforcement, and other activities. This section addresses revenues; the next addresses expenditures.

4.6.1 Federal Payments

Major sources of natural resource-related revenues that the federal government collects and/or distributes include royalties on federal mineral leases, and PILT; these are covered below. The federal government collects additional revenue from other types of leases and sales of various permits for use of federal land; some of these additional sources of revenue are addressed in Chapter 5.

Leasable mineral production taking place on BLM and USFS public lands is assessed a federal mineral royalty. Oil and gas and surface-mined coal production is assessed at 12.5 percent of value after allowable deductions. Some other mineral production is assessed at lower rates. For example, production of coal mined underground is assessed at 8 percent, and federal royalties for trona production vary from 5 percent to 8 percent. Additional bonus payments are collected for some leases. In 2011, the federal government collected \$1.742 billion in royalties and \$242 million in bonuses, rents, and other revenues from federal mineral leases in Wyoming (ONRR 2012). The following paragraphs address the distribution of federal mineral revenues back to the state and local governments.

The federal government returns 49 percent of the total collected revenues to the state in which the mineral production occurred.⁶ In Wyoming, the allocation and distribution of the federal mineral revenues is based on a formula promulgated by the Wyoming statutes. Large portions of the state's share of federal mineral revenues are allocated to funds for a state budget reserve, for the University of Wyoming, for highways and roads, and for capital construction at the local level. According to state statutes, portions of the received federal mineral revenues are distributed by the state to cities and towns for planning, construction, and maintenance of public facilities. In addition, local school districts may benefit from federal mineral revenue payments through the School Foundation Fund and advanced entitlement grants for capital construction funds. The School Foundation Fund helps provide a guarantee level of funding for all of Wyoming's K–12 school districts.

Table 4-25 summarizes the state-wide allocations and distributions of federal mineral revenues between 2005 and 2010. In 2010, the largest disbursements were to the Budget Reserve Account (\$420 million), the Foundation Fund (\$299 million), and the Highway Fund (\$60.1 million). Cities and towns within Wyoming directly received \$18.6 million from federal mineral revenue distributions. However, these city and town disbursements do not include additional federal mineral revenue distributions of \$7.4 million from state funds for city, county, and special district capital construction projects to be expended as provided by W.S. 9-4-604(k)(i) or to fund bonds, the proceeds of which are used under W.S. 9-4-604(g). Additional disbursements to schools in the form of grants were \$5.3 million. Finally, counties, cities, and towns received additional disbursements out of some of the other funds. Bonus payments on royalties received from the federal government from coal, oil shale, or geothermal leases of federal land were also distributed for city, county, and special district capital construction (\$5.6 million), and school capital construction (\$38.1 million), as shown in Table 4-25.

Table 4-25. Wyoming Federal Mineral Revenue Distributions, 2006–2010

	2006	2007	2008	2009	2010
Royalty Distributions					
Cities and Towns	\$18,562,500	\$18,562,500	\$18,562,500	\$18,562,500	\$18,562,500
University of Wyoming	\$13,365,000	\$13,365,000	\$13,365,000	\$13,365,000	\$13,365,000
Foundation Fund	\$305,202,064	\$268,388,138	\$355,784,221	\$310,204,537	\$298,746,556
Highway Fund	\$60,142,500	\$60,142,500	\$60,142,500	\$60,142,500	\$60,142,500
Highway Fund – State Roads	\$4,455,000	\$4,455,000	\$4,455,000	\$4,455,000	\$4,455,000
Cities, Counties, and Special Districts Capital Construction	\$7,425,000	\$7,425,000	\$7,425,000	\$7,425,000	\$7,425,000
School Districts – Grants	\$5,346,000	\$5,346,000	\$5,346,000	\$5,346,000	\$5,346,000
1% General Fund	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Budget Reserve Account	\$440,092,087	\$371,530,741	\$534,000,227	\$424,874,535	\$419,988,019

⁶ The state share is sometimes said to be 50 percent. However, since fiscal year 2008, Congress has annually required a two-percent deduction (equivalent to one percent of total mineral revenues) from each year's state payments as part of the Interior, Environment, and Related Agencies Appropriations Acts to partially cover the costs of administering the federal mineral leasing program. This is a simpler form of an authority known as "net receipts sharing" that was in place until 2000. The state share was 50 percent between 2000 and 2008. See <http://www.whitehouse.gov/sites/default/files/omb/budget/fy2012/assets/int.html>, Mineral Leasing and Associated Payments section.

	2006	2007	2008	2009	2010
Bonus Payment Distributions					
Cities, Counties and Special Districts Capital Construction	\$5,625,000	\$5,625,000	\$5,625,000	\$5,625,000	\$5,625,000
School Capital Construction	\$198,653,794	\$160,703,329	\$175,791,080	\$204,530,037	\$38,122,169
Community College Commission	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000	\$1,600,000
Highway Funds	\$1,875,000	\$1,875,000	\$1,875,000	\$1,875,000	\$1,875,000
Total FY Distributions	\$1,064,343,945	\$921,018,208	\$1,185,971,528	\$1,060,005,109	\$877,252,744

Source: Wyoming State Treasurer's Office Annual Report 2005-2010.

While the state passes federal mineral revenues back to local government and schools in several ways, as just discussed, these direct payments are a relatively small portion of the total federal mineral revenues received the state receives. For 2010, the five payments noted above amounted to 8.6 percent of total federal mineral revenues. This percentage was higher in earlier years shown in Table 4-25, with a maximum of 22.8 percent in 2009.

PILT payments from the federal government to local governments to help compensate for lost property taxes resulting from tax exempt federal lands located within the local jurisdiction (Department of the Interior 2010). PILT payments are administered by the Department of the Interior and are made for lands managed by BLM, the USFS, the National Park Service, and the FWS, as well as some federal water projects and military installations. Local governments use PILT payments to pay for various government services, such as law enforcement and infrastructure. The payments are calculated based on acreage on eligible lands within the county, population, and other federal transfers, such as mineral royalties. Table 4-26 contains PILT payments to the socioeconomic study area counties between 2005 and 2010. This PILT payment data is for all federal lands and because of the payment formula cannot readily be segregated out to BLM and the USFS versus other federal lands. In 2010, Sweetwater County and Fremont County received the largest PILT payments, \$2.7 million and \$2.5 million, respectively. Sublette County had the lowest PILT payment at \$0.9 million. In all counties, PILT payments increased substantially between 2005 and 2010, due to an increase in Congressional funding for the program.

Table 4-26. PILT Payments in the Socioeconomic Study Area, 2005–2010

County	2005	2006	2007	2008	2009	2010
Albany	\$853,913	\$870,156	\$870,156	\$1,379,358	\$1,379,358	\$1,379,358
Campbell	\$343,904	\$344,493	\$344,493	\$552,015	\$552,015	\$552,015
Carbon	\$668,767	\$684,186	\$684,186	\$1,089,205	\$1,089,205	\$1,089,205
Converse	\$306,531	\$325,841	\$325,841	\$517,051	\$517,051	\$517,051
Crook	\$195,003	\$200,686	\$200,686	\$299,116	\$299,116	\$299,116
Fremont	\$1,546,803	\$1,576,233	\$1,576,233	\$2,513,884	\$2,513,884	\$2,513,884
Goshen	\$38,940	\$39,600	\$39,600	\$62,579	\$62,579	\$62,579
Laramie	\$13,900	\$14,136	\$14,136	\$21,773	\$21,773	\$21,773
Lincoln	\$757,883	\$817,726	\$817,726	\$1,295,915	\$1,295,915	\$1,295,915
Natrona	\$1,908,155	\$1,943,020	\$1,943,020	\$3,067,931	\$3,067,931	\$3,067,931
Niobrara	\$177,261	\$180,289	\$180,289	\$284,710	\$284,710	\$284,710
Park	\$1,130,832	\$1,153,749	\$1,300,021	\$1,906,035	\$1,962,877	\$1,183,971

County	2005	2006	2007	2008	2009	2010
Platte	\$151,482	\$154,058	\$154,058	\$243,277	\$243,277	\$243,277
Sublette	\$481,089	\$491,999	\$491,999	\$778,011	\$778,011	\$778,011
Sweetwater	\$1,624,031	\$1,699,067	\$1,699,067	\$2,699,785	\$2,699,785	\$2,699,785
Teton	\$841,470	\$859,886	\$861,208	\$516,584	\$1,480,721	\$1,661,840
Uinta	\$799,989	\$813,730	\$813,730	\$1,285,407	\$1,285,407	\$1,285,407
Weston	\$125,029	\$129,327	\$129,327	\$215,558	\$215,558	\$215,558

Source: U.S. Department of the Interior, National Business Center, PILT County Payments 2005 through 2010.

4.6.2 State and Local Revenues

The Wyoming state government levies the following taxes: mineral severance taxes, sales tax, use tax, franchise tax, cigarette tax, and other taxes. Wyoming does not have individual or corporate income taxes and does not collect inheritance taxes. The Wyoming Department of Revenue collects excise taxes (sales, use, franchise, cigarette), mineral severance taxes, and certain designated taxes in accordance with Wyoming statutes and rules. Local governments collect ad valorem mineral taxes, as well as state assessed and locally assessed property taxes, county levies, municipal levies, special district taxes, and education levies.

4.6.2.1 Production-Based Mineral Taxes

Mineral severance taxes are a key revenue source for the state. The state assesses the value of mineral production and applies and collects severance taxes against 100 percent of the value, minus certain exemptions. The severance tax rates range from 2.0 percent for many solid minerals to 6.0 percent for most oils and gas production to 7.0 percent for surface coal.

Table 4-27 shows how mineral severance taxes were distributed in fiscal year 2010. As with federal mineral revenues, most mineral severance tax revenue remains with the state, mostly in the General Fund, the Budget Reserve Account, and the Permanent Wyoming Mineral Trust Fund.⁷ Direct payments to cities and towns in 2010 were \$14.3 million, and direct payments to counties were \$6.0 million. Payments to cities, towns, counties, and special districts for capital construction were \$3.6 million, and state aid to county roads totaled \$4.5 million. Together, these distributions totaled \$28.5 million, which was 3.1 percent of the total severance tax distributions. While local governments benefit from some of the other distributions, such as the highway fund, those amounts are also small.

Table 4-27. Distributions of Mineral Severance Taxes, Fiscal Year 2010

Distribution	Amount
General Fund	\$226,994,930
Budget Reserve Account	\$260,982,942
Permanent Wyoming Mineral Trust Fund ¹	\$371,323,873

⁷ The Permanent Wyoming Mineral Trust Fund (PWMTF) was established by a state constitutional amendment in 1974, which requires a 1.5 percent severance tax on oil, natural gas, coal, and other minerals designated by the legislature to be deposited to the PWMTF. As of 2005, an additional 1.0 percent is deposited. Thus, the total contribution to the fund is equivalent to a 2.5 percent severance tax on the value of all mineral production (and thus a variable portion of the 2.0 to 7.0 percent total severance tax rates) (Temte 2010). The 2011 year-end market value of the PWMTF was \$5.326 billion. Investment income from the fund flows to the state general fund; in fiscal year 2011, this contribution was \$216 million (Wyoming State Treasurer's Office 2011).

Distribution	Amount
Wyoming Water Development Account I	\$19,297,696
Wyoming Water Development Account II	\$3,254,961
Wyoming Water Development Account III	\$775,191
Highway Fund	\$6,711,030
Cities and Towns	\$14,336,803
Counties	\$6,014,028
School Foundation	\$0
Community Colleges	\$0
Cities, Towns, Counties, and Special Districts Capital Construction	\$3,611,625
State Aid County Roads	\$4,495,107
Others (primarily Wyoming Department of Environmental Quality Leaking Underground Storage Tanks Accounts)	\$10,163,192
Totals	\$927,961,378

Source: Wyoming Consensus Revenue Estimating Group 2012.

¹ Includes Permanent Wyoming Mineral Trust Fund Reserve.

Table 4-28 shows the total amount of severance taxes distributed by the state to the counties in the socioeconomic study area between 2005 and 2010. Severance tax distribution for the socioeconomic study area peaked in 2007, declined in 2008 and 2009, and turned upward in 2010. Additional severance tax revenue distributions were also made directly to cities and towns; to cities, towns, counties, and special districts for capital construction; and as state aid to county roads. But, as described earlier, these distributions were not especially large.

Table 4-28. Severance Tax Distribution by County

County	2005	2006	2007	2008	2009	2010
Albany	\$384,957	\$397,314	\$404,989	\$394,818	\$372,865	\$385,460
Campbell	\$380,925	\$390,934	\$396,655	\$385,972	\$369,118	\$380,319
Carbon	\$188,710	\$193,584	\$195,929	\$187,265	\$177,916	\$184,066
Converse	\$150,041	\$155,108	\$158,919	\$155,085	\$145,478	\$149,131
Crook	\$121,697	\$132,801	\$135,369	\$126,191	\$111,551	\$113,478
Fremont	\$413,169	\$423,863	\$428,472	\$413,966	\$395,530	\$411,137
Goshen	\$198,867	\$212,508	\$224,635	\$222,135	\$199,864	\$211,709
Laramie	\$927,418	\$952,638	\$967,158	\$941,304	\$899,146	\$926,971
Lincoln	\$174,863	\$179,921	\$181,845	\$174,685	\$165,949	\$171,660
Natrona	\$758,628	\$779,260	\$789,840	\$766,891	\$732,593	\$755,055
Niobrara	\$155,667	\$175,614	\$192,530	\$169,829	\$137,540	\$136,570
Park	\$303,648	\$312,518	\$317,072	\$308,868	\$291,446	\$299,481
Platte	\$142,307	\$153,220	\$162,895	\$167,000	\$149,182	\$163,606
Sublette	\$71,902	\$72,776	\$73,055	\$69,314	\$66,099	\$68,318
Sweetwater	\$427,328	\$438,560	\$444,866	\$432,096	\$413,062	\$425,873

County	2005	2006	2007	2008	2009	2010
Teton	\$212,350	\$218,858	\$222,659	\$216,771	\$206,033	\$211,775
Uinta	\$232,631	\$239,556	\$243,389	\$235,825	\$224,308	\$234,171
Weston	\$139,864	\$151,853	\$156,779	\$147,782	\$129,892	\$134,912
Study Area	\$5,384,972	\$5,580,886	\$5,697,056	\$5,515,797	\$5,187,572	\$5,363,692

Source: Wyoming State Treasurer's Office Annual Reports 2005–2010.

Ad valorem taxes from mineral production are another source of revenue derived from mineral production. The state assesses the value of mineral production (the same value used for levies of the state's severance taxes). The counties then apply mill levies to 100 percent of the state-assessed value and collect the ad valorem tax. One percent of tax equals 10 mills. Table 4-29 summarizes the average mineral mill levy and the total mineral ad valorem tax assessed in the socioeconomic study area and in Wyoming. These figures are shown in nominal dollars, which better describes the relative importance of the tax revenues to the local and state governments over time. In 2005, mineral ad valorem production taxes assessed in the socioeconomic study area accounted for 95 percent of all mineral ad valorem production taxes assessed in the state. 2007 saw that percentage drop to 91 percent of the state total, and 2010 saw a continued decline to 89 percent of the state total. The total ad valorem taxes assessed in the study area rose from \$679.8 million in 2005 to \$913.0 million in 2007 and dropped to \$696.9 million in 2010. The variation is a function of total production and mineral prices in each year. Campbell, Sublette, and Sweetwater counties produce far larger amounts of ad valorem tax than any other counties. In 2010, the ad valorem tax assessed in these three counties amounted to nearly 66 percent of all mineral ad valorem production taxes assessed in the state.

**Table 4-29. Total Mineral Ad Valorem Production Tax Assessed:
2005, 2007, and 2010**

County	2005		2007		2010	
	Average Mineral Mill Levy	Ad Valorem Production Tax Assessed	Average Mineral Mill Levy	Ad Valorem Production Tax Assessed	Average Mineral Mill Levy	Ad Valorem Production Tax Assessed
Albany	67.000	\$278,219	65	\$312,062	63.949	\$309,041
Campbell	58.901	\$184,415,685	59.815	\$233,486,459	59.776	\$243,867,658
Carbon	62.308	\$31,910,516	61.807	\$41,807,319	66.435	\$30,532,535
Converse	59.556	\$15,909,882	60.26	\$18,569,742	59.97	\$22,299,654
Crook	60.534	\$4,035,290	61.522	\$5,309,708	61.519	\$5,309,173
Fremont	71.297	\$51,592,975	70.81	\$61,386,027	72.266	\$26,160,848
Goshen	68.020	\$1,384	68.013	\$2,892	68.02	\$1,149
Laramie	67.050	\$1,090,548	71.829	\$1,622,651	67.515	\$1,906,993
Lincoln	60.608	\$29,863,401	61.876	\$36,197,272	62.567	\$24,400,390
Natrona	67.271	\$22,243,154	66.028	\$26,848,122	70.717	\$22,321,338
Niobrara	68.500	\$1,071,448	68.5	\$2,207,037	68.5	\$2,030,903
Park	72.515	\$20,931,882	70.742	\$29,780,328	70.096	\$27,715,656
Platte	69.309	\$136,061	67.539	\$103,065	71.357	\$105,459
Sublette	58.476	\$159,931,009	59.27	\$224,804,720	59.558	\$186,118,882
Sweetwater	64.877	\$87,912,768	65.449	\$117,121,462	66.382	\$87,034,364
Teton	59.692	\$110,947	59.292	\$140,626	57.35	\$84,217
Uinta	61.237	\$28,303,507	62.706	\$29,059,972	63.964	\$12,968,409

County	2005		2007		2010	
	Average Mineral Mill Levy	Ad Valorem Production Tax Assessed	Average Mineral Mill Levy	Ad Valorem Production Tax Assessed	Average Mineral Mill Levy	Ad Valorem Production Tax Assessed
Weston	68.979	\$3,497,736	68.283	\$4,462,589	71.497	\$3,688,479
Study Area	1166.13	\$643,236,412	1168.741	\$833,222,053	1,181.44	\$696,885,148
Wyoming	65.903	\$679,817,058	62.593	\$913,011,683	62.375	\$784,912,412
Study Area % of State Total	—	94.6%	—	91.3%	—	88.8%

Source: Wyoming Department of Revenue Annual Report, 2005, 2007, 2010; Mineral Tax Division

The mill levies shown in Table 4-29 for each county are the total of the mill levies of various taxing entities. Each total may include levies by the statewide School Foundation Program, local school districts, community colleges, counties, cities and towns, and special districts. According to a 2010 presentation by the Wyoming Legislative Service Office (Temte, 2010), the total of \$1.851 billion in ad valorem property taxes levied in 2009 based on statewide assessed values of approximately \$11.4 billion for minerals and \$8.8 billion for other property accrued as follows: 70.1 percent K–12 education, 18.3 percent counties, 7.1 percent special districts, 2.5 percent community colleges, and 1.2 percent cities and towns.

Table 4-30 shows statewide oil and gas production valuations compared to all mineral valuations for 2005, 2007, and 2010. It also shows the ad valorem and severance tax collections for oil and gas and for all minerals, and shows oil and gas as a percentage of total mineral production valuation and taxes. As shown in Table 4-30, statewide oil and gas valuation was 16 percent of the total mineral valuation in 2005, followed by a small drop to 14 percent in 2007 and an increase to 19 percent in 2010. Oil and gas production accounted for 78 percent of all mineral production tax revenue in 2005, declining to 65 percent in 2010.

Table 4-30. Statewide Oil and Gas Ad Valorem and Severance Taxes Collected as a Percentage of Total Mineral Production Taxes Collected

Tax Category	2005			2007			2010		
	Oil/Gas Production	All Mineral Production	Oil/Gas % of total	Oil/Gas Production	All Mineral Production	Oil/Gas % of total	Oil/Gas Production	All Mineral Production	Oil/Gas % of total
Total Valuation	\$1,799,416,541	\$10,984,017,888	16%	\$2,069,911,273	\$14,586,380,458	14%	\$2,415,680,479	\$12,583,815,584	19%
Ad Valorem Tax	\$540,158,681	\$679,817,058	79%	\$712,637,118	\$913,011,683	78%	\$524,467,321	\$784,912,412	67%
Severance Tax	\$497,082,086	\$649,282,411	77%	\$666,397,115	\$882,383,479	76%	\$486,546,171	\$769,807,595	63%
Total Tax	\$1,037,240,767	\$1,329,099,469	78%	\$1,379,034,233	\$1,795,395,162	77%	\$1,011,013,492	\$1,554,720,007	65%

Source: Wyoming Department of Revenue Annual Report, 2005, 2007, 2010; Mineral Tax Division

4.6.2.2 Property Taxes

Property taxes are collected in Wyoming on property values that are assessed by either the state or by local government. In the case of state-assessed values, the state certifies the values to local government, which then collects the taxes. The state assesses the value of mineral production and certain nonmineral properties. Nonmineral property the state assesses includes airlines, utilities, pipelines and gas distribution systems, railroads, and telephone service. Assessed mineral production values and the ad valorem taxes levied on those values were described above. Another way of looking at mineral valuation is shown in Table 4-31, which includes the other types of property the state assesses. This table lists the total 2010 state-assessed values by type of company or production for the state. Natural gas has the highest assessed value at \$5.8 billion from 286 companies or producers. Coal, with only 17 companies or producers, has the second highest assessed value at \$3.8 billion. Oil has the most companies or producers in the state (531) and an assessed value of \$2.4 billion. In 2010, the total state assessed valuation was \$13.789 billion. Of this, the value of mineral production was \$12.584 billion.

Table 4-31. State Assessed Values by Type of Company or Producer, 2010

Type of Company or Producer	# of Companies or Producers	2010 Assessed Value
Natural Gas	286	\$5,861,051,297
Coal	17	\$3,834,477,312
Oil	531	\$2,439,657,555
Private Electrics/Gas	32	\$414,960,269
Trona	4	\$350,783,487
Railroads	3	\$259,627,196
Natural Gas Pipelines	19	\$191,815,459
Rural Electrics	23	\$160,110,614
Liquid Pipelines	18	\$97,382,721
Bentonite	6	\$33,864,379
Sand and Gravel	214	\$26,146,507
Uranium	4	\$22,702,505
Major Telephones	13	\$20,094,951
Cell/Reseller Telephones	25	\$19,273,437
Cable and Satellites	11	\$16,639,330
All other minerals	28	\$15,132,542
Rural Telephones	13	\$12,800,742
Municipal Electrics	12	\$7,320,473
Airlines	15	\$5,494,169
Total	1,274	\$13,789,334,945

Source: Wyoming Department of Revenue 2010 Annual Report, Property Tax Division.

Locally assessed taxes are based on valuations of real and personal property, including agricultural land, residential property, commercial property, and industrial property. Table 4-32 shows locally assessed property valuations for real and personal property in Wyoming in 2010; the total locally assessed valuation was \$7.527 billion. This valuation was 35.3 percent of the total assessed value in the state (\$13.789 billion state assessed and \$7.527 billion locally assessed, for a \$21.316 billion total).

Table 4-32. Locally Assessed Property Valuations, Wyoming, 2010

Type of Property	Assessed Value
Real Property	\$7,256,097,532
Personal Property	\$271,045,154
Total	\$7,527,142,686

Source: Wyoming Department of Revenue 2010 Annual Report, Property Tax Division.

Table 4-33 lists locally assessed property valuations for all property for the socioeconomic study area between 2005 and 2010. Throughout the socioeconomic study area, values have steadily increased over the last five years.

Table 4-33. Locally Assessed Property Valuations, 2006–2010

County	2005	2006	2007	2008	2009	2010
Albany	\$226,143,984	\$242,513,230	\$263,852,636	\$287,736,925	\$293,017,412	\$293,887,402
Campbell	\$452,603,785	\$486,502,114	\$561,650,264	\$637,462,775	\$761,319,842	\$762,140,943
Carbon	\$108,913,407	\$121,954,030	\$156,117,705	\$201,296,215	\$261,141,911	\$220,298,007
Converse	\$105,197,358	\$116,952,031	\$131,882,811	\$149,346,412	\$169,468,210	\$178,193,359
Crook	\$43,800,580	\$54,734,807	\$50,417,125	\$64,939,219	\$70,269,588	\$73,454,634
Fremont	\$242,999,522	\$265,090,829	\$303,432,207	\$344,770,320	\$367,178,842	\$381,990,364
Goshen	\$72,755,503	\$78,832,624	\$84,307,636	\$93,440,856	\$95,582,833	\$96,157,797
Laramie	\$582,820,730	\$652,493,806	\$697,048,532	\$749,405,507	\$774,077,579	\$793,184,544
Lincoln	\$216,398,163	\$246,341,051	\$299,520,738	\$390,362,515	\$410,462,460	\$408,997,661
Natrona	\$389,181,423	\$471,473,689	\$589,027,272	\$661,867,647	\$705,655,304	\$671,079,265
Niobrara	\$16,249,561	\$17,568,568	\$18,413,765	\$19,936,569	\$22,253,954	\$22,434,902
Park	\$222,957,576	\$246,341,136	\$286,738,881	\$316,585,083	\$336,920,437	\$330,014,595
Platte	\$50,825,436	\$52,296,834	\$58,470,622	\$62,092,738	\$64,973,120	\$65,771,217
Sublette	\$185,574,457	\$230,922,401	\$289,027,314	\$359,753,709	\$409,685,452	\$387,979,295
Sweetwater	\$339,464,379	\$390,096,548	\$472,134,020	\$562,464,929	\$627,661,731	\$617,832,780
Teton	\$830,357,245	\$910,057,219	\$999,867,944	\$1,279,512,511	\$1,313,278,913	\$1,176,619,784
Uinta	\$129,437,210	\$140,627,994	\$165,137,637	\$178,771,340	\$197,318,818	\$191,062,696
Weston	\$34,026,299	\$35,003,149	\$40,560,900	\$46,295,645	\$50,350,901	\$50,501,446

Source: Wyoming Department of Revenue 2010 Annual Report, Property Tax Division.

Table 4-34 shows locally assessed property valuations specific to minerals, by county, for 2005 and 2010. These valuations are of mining property and equipment, not the mineral production itself. Total valuation increased substantially in most counties. For the socioeconomic study area, total mineral properties valuation increased from \$0.802 billion to \$1.554 billion led by a large increase in the valuation of oil and gas properties.

The total state-wide mineral properties valuation of \$1.714 billion in 2010 is 22.8 percent of the total locally assessed property valuation of \$7.527 billion. Thus, mineral properties also account for about the same percentage of taxes collected on locally assessed property.

Table 4-34. Locally Assessed Valuations for Mineral Properties, 2005 and 2010 (\$1,000s)

County	2005						2010					
	Oil & Gas Extraction	Coal Mining	Metal Mining	Non-Metal Mining & Quarrying	Petroleum & Coal Product Manufac.	Total	Oil & Gas Extraction	Coal Mining	Metal Mining	Non-Metal Mining & Quarrying	Petroleum & Coal Product Manufac.	Total
Albany	84	0	0	0	0	84	182	0	0	18	1	201
Campbell	170	163,425	0	0	102,031	265,626	141,466	286,884	0	0	0	428,350
Carbon	21,654	840	110	0	13,492	36,095	90,148	456	78	0	11,472	102,153
Converse	2,431	16,356	3,232	140	11,949	34,108	4,075	31,011	5,133	0	14,584	54,804
Crook	895	0	0	3,748	0	4,644	1,506	0	0	1,650	0	3,156
Fremont	56,852	0	0	0	0	56,852	81,019	0	0	181	4,534	85,734
Goshen	0	0	0	0	1,054	1,055	0	0	0	14	1,050	1,064
Laramie	743	0	0	1,753	11,388	13,884	2,287	0	0	2,044	32,272	36,603
Lincoln	0	6,661	5,215	0	89,137	101,013	152,089	11,240	0	56	33,149	196,534
Natrona	15,935	0	46	1,022	2,587	19,591	45,273	0	0	1,425	6,206	52,905
Niobrara	378	0	0	0	8	385	2,069	0	0	0	13	2,082
Park	8,010	0	0	196	1,657	9,864	11,259	0	0	0	0	11,259
Platte	575	0	0	373	11	959	1,017	0	0	2	0	1,018
Sublette	61,299	0	0	0	0	61,299	235,022	0	0	0	0	235,022
Sweet-water	79,425	4,257	514	65,330	0	149,526	147,895	40,255	0	102,293	0	290,444
Teton	0	0	0	0	0	0	0	0	0	0	0	0
Uinta	5,261	0	0	0	36,738	41,999	45,411	0	0	0	10	45,421
Weston	1,528	0	0	312	3,628	5,467	2,669	0	0	515	3,705	6,888
Study Area	255,239	191,539	9,117	72,876	273,679	802,449	963,387	369,846	5,212	108,199	106,994	1,553,637
% of State Total	83%	100%	100%	93%	100%	93%	86%	100%	100%	99%	99%	91%
Wyoming	306,886	191,542	9,117	78,705	274,276	860,526	1,121,304	369,985	5,222	109,520	108,324	1,714,356

Source: Wyoming Department of Revenue Annual Report; 2005, 2010.

4.6.2.3 Other Taxes

Other tax revenue sources that may be affected by management actions associated with BLM-managed lands include sales and use taxes, lodging taxes, and fuel taxes. In addition, Wyoming continues to refine its levy of a production tax on wind energy.

According to the Wyoming Taxpayers Association (2012), lodging and fuel taxes are relatively small compared with sales and use taxes, totaling \$8.1 and \$41.6 million statewide in 2011. Sales and use taxes are a much larger revenue source. The state has a 4 percent rate for sales and use tax. Counties may levy up to an additional 3 percent with voter approval. Table 4-35 shows sales and use tax collections for fiscal year 2010.

Table 4-35. Sales and Use Tax Collections by County, Fiscal Year 2010

County	4% State Tax	Local Levy	Total
Albany	\$19,010,287	\$9,505,103	\$28,515,390
Campbell	\$108,654,080	\$26,846,533	\$135,500,613
Carbon	\$18,210,158	\$9,074,666	\$27,284,824
Converse	\$16,699,327	\$4,174,817	\$20,874,144
Crook	\$4,342,147	\$2,170,381	\$6,512,528
Fremont	\$28,165,025	\$212,362	\$28,377,387
Goshen	\$5,736,163	\$1,490,296	\$7,226,459
Laramie	\$57,939,993	\$28,968,871	\$86,908,864
Lincoln	\$13,052,710	\$3,261,730	\$16,314,440
Natrona	\$70,455,790	\$17,613,820	\$88,069,610
Niobrara	\$1,771,749	\$885,844	\$2,657,593
Park	\$23,952,677	\$2,882,745	\$26,835,422
Platte	\$5,883,990	\$2,937,059	\$8,821,049
Sublette	\$60,073,816	\$0	\$60,073,816
Sweetwater	\$68,156,887	\$27,584,486	\$95,741,373
Teton	\$35,302,606	\$19,277,749	\$54,580,355
Uinta	\$13,912,618	\$3,477,223	\$17,389,841
Weston	\$4,072,226	\$1,018,049	\$5,090,275
Study Area Total	\$555,392,249	\$161,381,734	\$716,773,983
State Total	\$603,076,040	\$178,927,524	\$782,003,564

Source: Wyoming Economic Analysis Division 2012.

Sales and use tax collections are split between the state general fund and local governments. Statewide, the distribution in 2010 was 54 percent to the state general fund and 46 percent to local governments (Wyoming Department of Revenue 2011). One example of such distributions is the Wyoming Impact Assistance Tax Program. Wyoming Statutes provide for counties that have a major construction project of \$170.3 million or larger to receive extra revenue in direct proportion to any increase in their tax collections to help with the impact caused by the project. These funds are transferred from the state general fund to the county treasurer of the impacted county. These transfers totaled \$16.3 million in fiscal year 2009, \$2.2 million in fiscal year 2010, and \$0.8 million in fiscal year 2011 (Wyoming Department of Revenue 2011).

There are clear, well-recognized linkages between sales and use taxes and both local consumer expenditures and tourism expenditures. It is also important to realize the linkages between sales and use taxes and the capital investment and other activities associated with energy development and production. Sales and use taxes are generated from expenditures on labor and equipment as well as other goods and services required by the energy industry, but not always in proportion to needs for local or state government provision of infrastructure and services that are impacted by energy development and production. There are some risks to state and local sales and use tax revenues and expenditures based on the level of energy development.

4.7 GOVERNMENT EXPENDITURES

4.7.1 Local Government Expenditures and Services

Management of BLM and USFS administered land may affect state and local expenditures. For instance, recreation on public lands requires some support from local government for road maintenance, law enforcement, and search and rescue. Heavy truck traffic from mineral development and production may significantly impact state and local roads. It is difficult to separate expenditures related to BLM and USFS administered land from expenditures related to other land. Depending on the nature of the management alternatives identified in BLM RMP/EISs and USFS LRMP/EISs and the scope and scale of potential impacts, this topic may require further consideration during the impacts analysis phase of the process.

The types of state and local expenditures that may be affected include the following:

- Maintenance of state and local roads
- Law enforcement personnel and equipment
- Emergency medical services
- Search and rescue teams
- Conservation and wildlife management
- Fire management
- Solid waste collection and disposal
- Public utilities.

These expenditures may be affected in two ways. First, increased use of public land resources may result in greater needs for the types of services and infrastructure listed above. For instance, increased backcountry recreational use may put greater demands on local search and rescue teams. Increased heavy truck traffic from oil and gas development may increase road maintenance needs.

In addition, in less common cases where use of public land resources leads to substantially increased employment opportunities (such as in an energy development boom), population in study area communities may increase, which often leads to increased demand for the services and infrastructure listed above, and may lead to additional needs, such as increased school space, teachers, and other public facilities and personnel.

4.7.2 Federal Expenditures

Federal government expenditures related to federal lands benefit the local economy because federal salaries for land management staff that reside in the socioeconomic study area and federal contracts to businesses located in or with employees residing in the socioeconomic study area represent inflows of money. For instance, Table 4-36 shows BLM's annual budget for Wyoming in 2011, broken down by the types of expenditures. This data is not specific to the socioeconomic study area; however, as all or most of 8 of BLM's 10 Field Offices in Wyoming are in the socioeconomic study area, most of the dollars shown

in the table below are related to management of BLM lands in the socioeconomic study area. The USFS also makes considerable expenditures within the socioeconomic study area that benefit the local economy.

Table 4-36. BLM Wyoming’s Annual Budget for 2011

Item	Expenditure (\$)
Management of land and resources	\$81,277,239
Land acquisition	\$2,734,295
Range improvements	\$943,233
Construction and access	\$55,967
Wildland fire preparedness	\$4,094,298
Wildland fire suppression	\$4,939,402
Wildland fire fuels	\$3,270,377
Energy pilot office funding	\$3,004,653
Motorized fleet	\$3,508,167
Reimbursables	\$5,184,470
Other	\$570,838
American Recovery and Reinvestment Act	\$5,853,711
Total	\$115,436,650

Source: BLM 2011.

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CHAPTER 5—PUBLIC LAND USES AND VALUES

This chapter profiles some of the many uses of BLM- and USFS-administered public lands in the planning area. It describes some of the economic and social implications of those uses, including quantitative values where readily available. This chapter also includes a discussion of nonmarket values, which are often overlooked when the economics of public lands are discussed. Given the information that was readily available when this report was prepared, most of the material below focuses on BLM land, or describes public land uses and values in the BLM context.

To describe BLM and USFS public land resource uses and associated values, the material below provides overviews of some important BLM and USFS policies and programs for resource management. It also identifies some important resource use conditions and practices in the planning area. Additional information on each resource use is available in the Analysis of the Management Situation (AMS) and Chapter 3 of the Draft RMP/EIS (separate documents for BLM and USFS).

During the impacts analysis phase of this planning process, the economic impacts of the management alternatives will be estimated using the IMPLAN (IMPact analysis for PLANning) economic impact model. The IMPLAN model was originally developed by the USFS and is commonly used by BLM, USFS, and many other government and private sector organizations to estimate the total economic impacts of various activities and policies. The model tracks interindustry and consumer spending in a local or regional economy, allowing estimation of indirect and induced economic impacts in the economy (from the interindustry transactions and respending of household income, respectively, that result from the original economic activity or change in economic activity). Outputs of the IMPLAN model include employment, income, and gross regional economic output.

The IMPLAN model uses data specific to the local economy wherever possible, but also uses some data based on national-level economic relationships. Therefore, the model benefits from “calibration” of some of its data to better reflect the local economy. For the impact analysis, IMPLAN will be calibrated based on work the University of Wyoming has done with the model in Wyoming over many years and with data specific to BLM and USFS public land uses. Methodologies specific to each land use for implementing the calibrated IMPLAN model to estimate economic impacts are described briefly for some of the public land uses below.

5.1 GRAZING

Grazing is an important use of BLM and USFS public lands. The kinds of livestock grazing on public lands in the socioeconomic study area consist primarily of cattle and sheep, but also include domestic horses. Goats are sometimes authorized for the purpose of suppressing weeds. The relative numbers of these grazing animals has varied in response to their economic value as a commodity and their use in ranching operations.

Livestock grazing has been an important economic activity in the socioeconomic study area and continues as an economic contributor locally and a livelihood for persons in the industry. It is also very significant to the cultural identity of the region and especially to certain communities and stakeholder groups. Ranching has a long history in the socioeconomic study area and has played a key role in the economic and social development of Wyoming. Use of BLM and USFS public lands for grazing livestock has been a vital component of that history and remains important today.

BLM and USFS allocate forage among uses based on the carrying capacity of the land. Carrying capacity reflects the maximum level of grazing and other uses of forage that the public lands can sustain on a long-term basis. A more specific definition of carrying capacity is “livestock carrying capacity,” which means the maximum stocking rate possible without inducing damage to vegetation or related resources. In

addition to livestock, forage allocations are made for wildlife, wild horses, and other purposes. Carrying capacity may vary from year to year on the same area due to fluctuating forage production. In addition, available forage for livestock grazing varies with changes in climatic conditions, forage production, and the availability of water.

Forage availability is expressed in animal unit months (AUMs). According to BLM Grazing Regulations (43 C.F.R. Part 4100), an AUM represents “the amount of forage necessary for the sustenance of one cow or its equivalent for a period of 1 month.” Typically, a cow and her calf qualify as an AUM. A horse is usually considered 1.25 AUMs, sheep are typically measured at 5 sheep for every AUM, and goats are measured at 6 goats for every AUM.

Permitted use is the amount of forage, in AUMs, available for livestock grazing under a permit or lease. In any given year, more or less forage may be authorized and billed for livestock grazing under a valid permit or lease due to fluctuating forage production.

Livestock grazing on specific allotments within BLM and USFS administrative units is authorized during different seasons. The grazing seasons vary with elevation and geographical change, resource needs, and user preference. The higher elevation allotments are generally grazed during summer and fall. The lower elevation areas may be grazed during any season, but are generally used in the fall, winter, and spring. The majority of the allotments in the planning area are operated under grazing strategies incorporating rest, seasonal rotations, deferment, and prescribed use levels that provide for adequate plant recovery time to enhance rangeland health. When rangelands are not meeting resource objectives, changes in grazing management are implemented.

Grazing on BLM and USFS public lands is very important to many livestock operators. Dependence on federal lands (versus other lands) varies by operator, but some graze almost entirely on public lands. Others may make substantial use of private lands, but may be very dependent on public lands for economical forage at certain times of the year. Many of the larger operators use public lands year-round.

Actual use of BLM and USFS lands for grazing has varied from year to year, in part because the planning area has experienced drought conditions. These conditions have resulted in less forage being available for livestock use at some times and the need for permittees/lessees to take voluntary nonuse. During drought years, the livestock operators, BLM, and the USFS work closely to tailor the adjustments in livestock use to meet the needs of the land and the ranch operation. In addition, annual fluctuations in the AUMs used may develop from user demands, climatic conditions, and/or from the collection of monitoring information.

Grazing fees for BLM lands are set annually by the Secretary of the Interior according to the provisions of 43 C.F.R. 4130.8-1. The fee is equal to the \$1.23 base established by the 1966 Western Livestock Grazing Survey, adjusted by indices for the value of forage, beef cattle prices, and livestock production costs, and is subject to a minimum fee of \$1.35 per AUM.

In accordance with 43 C.F.R. 4130.8-1(f), BLM adds a surcharge to the grazing fee bill for authorized grazing of livestock owned by persons other than the permittee or lessee, except where such use is made by livestock owned by sons and daughters of permittees and lessees as provided in 43 C.F.R. 4130.7(f). BLM adds the surcharge to the permittee’s or lessee’s grazing fee billing based on the number of AUMs being billed. The surcharge varies by state and equals 35 percent of the difference between the 2012 grazing fee and the 2011 private land lease rate for the state where the pasturing agreement occurs. The National Agricultural Statistics Service (NASS) publishes the state rates annually in January based on lease rates for private, nonirrigated grazing land from the January Cattle Survey.

The grazing for 2012 is \$1.35, and the surcharge is \$5.69. According to the NASS data, the average private land grazing fee in Wyoming in 2010 was \$16.60 per AUM. This fee is considerably more than the \$1.35 grazing fee BLM charged in 2010 or the fee plus the surcharge (\$5.13 in 2010), totaling \$6.48 per AUM (BLM IM 2010-067). Thus, grazing on BLM lands appears to provide considerable value to

BLM grazing permittees as compared to leasing private land. However, recent research has shown that, in spite of the difference in fees for grazing on public verse private land, when other factors are considered (such as animal loss, rangeland improvement and maintenance, moving livestock, and herding), the cost of forage on public land compared to private land is generally similar (Rimbey and Torell 2011).

Grazing fees and surcharges from BLM public lands use generate some revenue for the federal government. Of the grazing revenues collected, 50 percent goes to the BLM Range Improvement Fund and is distributed to BLM District Offices according to their grazing receipts, 37.5 percent goes to the U.S. Treasury General Fund, and 12.5 goes to the origin state and is distributed to local grazing boards.

Economic Impact

The value of cattle grazing in a specific area can be estimated based on the actual grazing use of the area quantified in AUMs multiplied by the value of an AUM. According to Workman (1986), it takes 16 AUMs to produce a marketable cow. Thus, the average value of an AUM can be estimated using data on the value of cattle production per bred cow and dividing by 16. These calculations are shown in Table 5-1. A similar procedure can be used to estimate the value of an AUM used for sheep production, using 3.2 AUMs per ewe, as shown in

Table 5-2.

Table 5-1. Value of an AUM for Cattle Production

Year	Value of Production per Bred Cow*	AUMs per Cow**	Value of Production per AUM	IMPLAN Deflator	Deflated Value of Production per AUM
2001	\$581.79	16	\$36.36	0.817	\$44.51
2002	\$533.64	16	\$33.35	0.831	\$40.14
2003	\$609.07	16	\$38.07	0.848	\$44.89
2004	\$706.24	16	\$44.14	0.872	\$50.62
2005	\$752.44	16	\$47.03	0.901	\$52.19
2006	\$720.09	16	\$45.01	0.930	\$48.39
2007	\$681.50	16	\$42.59	0.957	\$44.51
2008	\$496.02	16	\$31.00	0.978	\$31.70
2009	\$472.00	16	\$29.50	0.989	\$29.83
2010	\$570.50	16	\$35.66	1.000	\$35.66
10-year Average					\$42.24

*U.S. Department of Agriculture Economic Research Service, Commodity Costs & Returns, data for Basin and Range region, cow-calf pair.

** Workman (1986).

Table 5-2. Value of an AUM for Sheep Production

Year	Value of Production per Ewe**	AUMs per Ewe	Value of Production per AUM	IMPLAN Deflator	Deflated Value of Production per AUM
2000	\$127.48	3.2	\$39.84	0.721	\$55.25
2002	\$127.75	3.2	\$39.92	0.680	\$58.71
2004	\$134.08	3.2	\$41.90	0.938	\$44.67
2006	\$138.81	3.2	\$43.38	0.890	\$48.74

Year	Value of Production per Ewe**	AUMs per Ewe	Value of Production per AUM	IMPLAN Deflator	Deflated Value of Production per AUM
2008	\$136.53	3.2	\$42.67	1.011	\$42.20
2010	\$185.65	3.2	\$58.02	1.000	\$58.02
10-year Average (based on available data for every other year)					\$51.26

*Source: University of Idaho Extension, Idaho Livestock Costs and Returns Estimates, Sheep – Range, gross receipts per ewe. Data only available for every other year.

During the impact analysis phase of this planning process, the economic impact (e.g., jobs, income,) resulting from grazing on BLM and USFS lands will be estimated for a baseline scenario (no action alternative) and management alternatives. The methodology will be as follows:

1. Determine the total value of production by multiplying the value of production per AUM from the tables above by the number of AUMs. The number of permitted AUMs may vary by alternative, which will result in different economic impacts. As part of the analysis, the number of permitted AUMs will be adjusted for historical rates of actual use.
2. Allocate the total value of production to the various economic sectors (agricultural industry segments) to which the various portions of the value accrue.
3. Run these value allocations through the IMPLAN economic impact model to determine direct, indirect, and induced economic impacts.

5.2 MINERALS

For management purposes, federal minerals are classified into three categories—Saleable Minerals, Locatable Minerals, and Leasable Minerals.

- *Leasable minerals* are minerals for which the federal government issues leases, often through a competitive bidding process, allowing producers to access the mineral. Leasable minerals are divided into fluid and solid minerals. Leasable fluids include oil, gas, and geothermal. Solid leasables include coal, phosphate, potash, and sodium (e.g., trona). Except for coal, most solid leasables are used to make fertilizer and as feedstock for other industrial processes. Revenues from the leases are shared by the federal government and the state of origin. Many states direct portions of these revenues to local governments.
- *Locatable minerals* include hard-rock minerals, such as gold, silver, molybdenum, and uranium, and other minerals, such as gypsum, silica, and specialized clay products. Miners locate and stake (file) claims to acquire the right to develop the mineral values in a specified area under the provisions of the General Mining Law of 1872 as amended. Locatable minerals include both metallic minerals (precious and base metals) and nonmetallic minerals (gemstones and industrial minerals). Locatable minerals may produce severance taxes and other revenues to state governments, but other than small claim staking and maintenance fees, produce little to no revenue to the federal government.
- *Salable minerals, also known as mineral materials*, consist of common varieties of sand, stone, gravel, cinders, clay, pumice, and pumicite as described under the Materials Act of 1947 and the Surface Resources Act of 1955. No mining claims are required for their extraction. They are used in everyday building and other construction uses. These materials generally are bulky, and their sheer weight makes their transportation costs very high. Adequate local supplies of these basic

resources are vital to the economic life of any community. Saleable minerals are disposed of through a variety of contracted sales; most of the revenue goes to the U.S. Federal Treasury.

Mineral exploration, development, and production on federal mineral estate have many socioeconomic implications:

- Mineral exploration and mineral production generate economic activity through payments to labor and to capital both inside and outside of the socioeconomic study area.
- Mineral production generates tax revenue. Direct taxes on mineral production in Wyoming include severance taxes and ad valorem taxes. Additional tax revenues include property taxes on mining equipment and other mine-related assets, personal and corporate federal income tax on mining income (Wyoming has no state income taxes), and sales taxes. Several of these mineral-related tax revenues are detailed in section 4.6 (Public Finance) above.
- Some mineral production on federal mineral estate generates revenues to the federal government; for instance, federal mineral royalties. These federal revenues generally come from leasable minerals and salable minerals, but not locatable minerals. Some of these federal revenues are shared with the state, which may in turn share the revenues with local governments. The types of revenues collected and the distributions of revenues to state and local government are described in section 4.6.
- Mineral exploration and production have social significance as livelihoods for persons in the industry and to the cultural identity of certain communities and stakeholder groups.
- Mineral exploration and production may result in environmental impacts, demands on physical infrastructure, increased traffic, “boom and bust” economic cycles, and other impacts that have economic and social costs.

BLM, the USFS, and the state apply various fees and requirements to some or all mining operations. These fees and requirements include, but are not limited to, the following:

- **Claim staking and maintenance fees** – For locatable minerals, a claim staking fee of \$170 per claim is applied BLM-wide and a maintenance fee of \$140 per year per claim.
- **Reclamation bond** – Most mining operations, excluding some sand and gravel operations, must post a bond with BLM or the state that ensures adequate funds are available to reclaim the mine site when the mining operation is completed. The bonds are reviewed within specific timeframes and reflect the current costs to reclaim these sites. These costs include inflation, labor, equipment, and administrative costs so BLM can contract out, via a third party, to reclaim a site should it become abandoned.
- **Reclamation fee** – A payment made in lieu of a bond for some sand and gravel production.
- **Cost recovery** – BLM charges cost recovery fees when permitting many types of mineral production. The fees cover the cost of BLM staff time for the NEPA process (when applicable), for claim validity examinations, and for some other mineral program costs.

Mineral potential and current and projected minerals development and production varies across the socioeconomic study area. The AMS and Chapter 3 of the Draft EIS present detailed information.

Economic Impact

During the impact analysis phase of this planning process, the economic impact (e.g., jobs, income) resulting from mineral production on BLM and USFS lands will be estimated for a baseline scenario (no action alternative) and management alternatives. The analysis will be divided into estimates for mineral development (specifically, well drilling and completion for oil and gas) and estimates for mineral production. For drilling and completion, the methodology will be as follows:

1. Obtain data on the number of oil and gas wells drilled on decision area federal minerals per year and the number of wells completed (from the Reasonable Foreseeable Development scenario) and data on the costs of drilling and completion.
2. Determine total direct costs by multiplying wells drilled by the cost per well and wells completed by the cost of completion.
3. Allocate total costs to the various economic sectors (petroleum and supporting industry segments) from which the various labor and supplies for mineral development are purchased.
4. Run these cost allocations through the IMPLAN economic impact model to determine direct, indirect, and induced economic impacts.

For mineral production the methodology will be as follows:

1. Obtain data on annual production from decision area federal minerals. Adjust the data as necessary to account for changes in production over the planning period (e.g., increasing numbers of oil and gas wells each year; production life cycles of wells or well fields).
2. Obtain data on monetary value of production per unit of production.
3. Multiply production quantities by values per unit to determine the total value of production.
4. Allocate production values to the economic sector(s) that produce(s) the mineral in question.
5. Run these values through the IMPLAN economic impact model to determine direct, indirect, and induced economic impacts.

In addition, public revenue impacts such as federal mineral royalties, severance taxes, and ad valorem taxes will be calculated.

5.3 RENEWABLE ENERGY

Renewable energy development on public lands is tied to land availability, power line access, and reasonable access to utility markets. Such development also varies with the type of renewable energy. Solar needs relatively flat lands with less than 2 percent slope. Wind is typically sited in hilly areas. However, not all BLM or USFS public lands are open to renewable energy development, due to restrictions on ROW development and other considerations.

Wind energy is the form of renewable energy that has received the most interest for use of federal public lands in Wyoming in recent years. For over a decade, wind energy has been the fastest growing energy technology worldwide, achieving an annual growth rate of over 30 percent. In the United States, the current total installed wind energy capacity is approximately 46,900 megawatts (MW), of which approximately 440 MW is located on BLM-administered public lands (BLM 2012a). Much of Wyoming has fair to excellent wind energy potential, with some areas having outstanding to superb potential as identified by the Department of Energy's National Renewable Energy Laboratory. Currently, most of the interest has been focused on southern Wyoming.

The only project currently completed on BLM land in the socioeconomic study area is the Wyoming Wind Project, located on Foote Creek Rim above Arlington. It had an initial generating capacity of more than 85 MW of electricity, enough for about 27,000 average homes. Since development of the original 69 turbine project, several subsequent phases have been constructed, and the project now totals 183 turbines, with a generating capacity of 134.7 MW.

Many additional projects on BLM land are in various stages of development. For example, the Chokecherry and Sierra Madre Wind Energy project is proposing to build 1,000 turbines on approximately 98,500 acres south of Rawlins in Carbon County. The White Mountain Energy project is proposing the construction of 240 turbines northwest of Rock Springs. Table 5-3 details the status of wind projects currently underway or completed as of February 2012 on BLM lands throughout Wyoming. All of these projects are within the socioeconomic study area.

Table 5-3. Wyoming BLM Wind Energy Projects

Project Name	Status	BLM Field Office
Badwater	Full Field Development	Casper
Beaver Divide West	Full Field Development	Lander
Beaver Rim (Beaver Divide Power)	Full Field Development	Lander
Beaver Rim (Wasatch Wind)	Full Field Development	Lander
Boner, Vollman & Scott Ranches	Full Field Development	Casper
Brush Creek Road	Full Field Development	Casper
Chokecherry-Sierra Madre	Processing	Rawlins
Cyclone Rim	Full Field Development	Lander
Dry Creek	Full Field Development	Casper
Foote Creek Rim	Completed	Rawlins
Goshen Rim	Full Field Development	Casper
Green Mountain	Full Field Development	Lander
Gumbo Hill	Full Field Development	Casper
Miller Mountain	Processing	Rock Springs
Pathfinder Wind	Full Field Development	Casper
Pathfinder Wind #2	Full Field Development	Casper
Quaking Aspen	Full Field Development	Rock Springs
Rattlesnake Hills	Full Field Development	Casper
Rattlesnake Range South	Full Field Development	Casper
Sand Hills	Processing	Rawlins
Sweeney Ranch	Processing	Rock Springs
White Mountain (Evergreen)	Processing	Rock Springs
White Mountain (Teton)	Processing	Rock Springs

Source: BLM 2012b.

Within the USFS units that are part of this planning action, there has been limited renewable energy activity. In the MBNF, while there has been some exploration of wind, solar, biomass, and geothermal resources, these activities have predominantly occurred in the Pole Mountain area of the forest. There is no core or general sage-grouse habitat in this area. In the BTNF, there are numerous past geothermal exploration sites. There are neither current renewable energy projects in the BTNF, nor any foreseeable interest. The Wyoming Range Legacy Act withdrew additional areas from geothermal leasing, subject to valid existing rights.

Economic Impact

During the impact analysis phase of this planning process, the economic impact (e.g., jobs, income) resulting from renewable energy uses of BLM and USFS lands will be estimated for a baseline scenario (no action alternative) and management alternatives. The analysis will be divided into estimates for renewable energy development and estimates for renewable energy production. The analyses will likely be limited to wind energy impacts, given that other forms of renewable energy appear unlikely to receive considerable attention in the planning area within the planning period. For wind energy development, the methodology will be as follows:

1. Obtain data on the estimated wind energy capacity (MW) that will be installed in the planning area throughout the planning period.

2. Estimate the construction expenditures per MW for the estimated amount of wind energy development. It is likely that a wind generation cost model—the Jobs and Economic Development Impact (JEDI) model from the Department of Energy National Renewable Energy Laboratory—will be used to generate the expenditure estimates. The model may be adjusted to reflect typical wind projects in Wyoming.
3. Determine total direct expenditures by multiplying estimated capacity in MW by expenditures per MW.
4. Allocate total estimated expenditures to the various economic sectors from which the various labor and supplies for wind energy development are purchased.
5. Run these expenditure allocations through the IMPLAN economic impact model to determine direct, indirect, and induced economic impacts.

For wind energy production, the methodology will be as follows:

1. Obtain data on estimated annual wind energy production or numbers of wind energy turbines for the projected capacity for the planning period. Adjust the data as necessary to account for changes in production over the planning period (e.g., increasing numbers of turbines each year).
2. Obtain estimates of the dollar value of labor and other requirements per unit of wind energy production. It is likely that the JEDI model will be used for these estimates.
3. Multiply wind energy production or turbine quantities by the operating values per unit to determine the expenditures resulting from the production levels.
4. Allocate production values to the economic sectors from which the labor and other requirements are purchased.
5. Run these values through the IMPLAN economic impact model to determine direct, indirect, and induced economic impacts.

In addition, public revenue impacts such as wind energy production taxes and property taxes will be calculated.

5.4 RECREATION/TRANSPORTATION (OHV USE)

OHV use is an important form of recreation on both BLM and USFS public lands. Of the various types of recreation on these public lands, OHV use is most likely to be impacted by management decisions resulting from this planning effort. Therefore, this discussion focuses on OHV use and predominantly on BLM public lands. The AMS and Chapter 3 of the Draft EIS present additional information on OHV policies and use patterns.

The national BLM objectives for OHV management are to protect the resources of public lands, promote the safety of all users of those lands, and minimize conflicts among the various uses of those lands (BLM 2001). OHVs are defined as “any motorized vehicle capable of or designated for, travel on or immediately over land, water, or other natural terrain, excluding (1) any non-amphibious registered motorboat; (2) any military, fire, emergency or law enforcement vehicle when being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; (4) vehicle in official use; and (5) any combat or combat support vehicle when used in times of national defense emergencies” (43 CFR 8340.0-5).

The majority of OHV use on public lands occurs on unpaved roads and two-track trails. In the planning area, the most common vehicles used are 4-wheel drive trucks, all-terrain vehicles (ATVs), and sport utility vehicles. Snowmobile use is another popular OHV activity. Typical recreational OHV activities within the planning area include casual ATV and motorcycle trail riding, enduro races, trial competitions, and snowmobiling. OHV use, in itself, has become a popular method of exploring public lands.

OHVs are used within the planning area for nonrecreational purposes as well. Nonrecreational OHV use of the planning area includes agricultural management, energy development, and land management activities. OHVs also are used for noncommercial collection of decorative rock and native plant materials. Employees of government agencies, ranchers, timber companies, energy companies, and utility providers are permitted users who utilize OHVs to access and maintain the infrastructure required for the continued operation and maintenance of their facilities. BLM uses OHVs for range inspections, vegetation treatments, surveying and mapping, inventories, monitoring, fire suppression, project construction, and maintenance.

The BLM has established OHV and snowmobile area designations in accordance with *BLM Land Use Planning Handbook* requirements and 43 CFR 8342.1. These designations outline management prescriptions and set restrictions on OHV use. Possible OHV designations are open, limited, or closed, as follows:

- **Open:** Areas used for intensive OHV use where there are no compelling resource needs, user conflicts, or public safety issues to warrant limiting cross-country travel.
- **Limited:** Areas or trails where BLM must restrict OHV use to meet specific resource management objectives. These limitations may include limiting the time, number, or types of vehicles; limiting the time or season of use; limiting to existing roads and trails; and limiting use to designated roads and trails. BLM may place additional limitations, as necessary, to protect other resources, particularly in areas that OHV enthusiasts used intensely or where they participate in competitive events. Limited can be broken into three categories:
 - **Existing.** Vehicle travel is permitted only on existing roads and vehicle routes that were in existence before the date of designation in the *Federal Register*.
 - **Designated.** Vehicle travel is permitted only on roads and vehicle routes designated by BLM. In areas where final designation has not been completed, vehicle travel is limited to existing roads and vehicle routes as described above.
 - **Administrative.** Vehicle travel off existing vehicle routes is permitted only to accomplish necessary tasks and only if such travel does not result in resource damage. Random travel from existing vehicle routes is not allowed. Creation of new routes or extensions and/or widening of existing routes is not allowed without prior written agency approval.
- **Closed:** This designation is used if closure to all vehicular use is necessary to protect resources, ensure visitor safety, or reduce conflicts. Seasonal closures also exist in the planning area, which restrict OHV use in certain areas (generally crucial and critical wildlife areas) seasonally. The dates for these closures vary based on the area and species that they were instituted to protect.

People with disabilities may be allowed to travel on OHVs in otherwise closed areas on a case-by-case basis. Such travel would require a request to a BLM Field Office to initiate the exception.

According to a mid-2000s study by the Wyoming Department of State Parks and Cultural Resources, shown in Table 5-4, USFS land was used by 36 percent of resident and 38 percent of nonresident ORV (i.e., OHV) users. BLM land was used by 14 percent of resident and 10 percent of nonresident OHV users. BLM estimates that 300,020 OHV users visited BLM lands in Wyoming in 2009 (BLM 2009).

Table 5-4. OHV Trips by Land Ownership (Percent)

Land Owner	Residents	Nonresidents
USFS	36.4%	37.6%
BLM	14.0%	10.3%
Other	49.6%	52.1%

Source: Foulke et al 2006

OHV use access to public lands is important to economic activity and quality of life. For instance, access to ROWs, communication sites, mining sites, and other commercial sites may impact the commercial viability of the operations at these sites and thereby effect the contributions of these sites to the local economy. Recreational use of OHVs also contributes to the local economy when OHV users make local expenditures for goods and services associated with their use of BLM public lands for OHV riding. These expenditures also generate tax revenues.

OHV use can also have negative impacts. OHV damage includes driving off established roads and trails, pioneering unauthorized roads and trails, and associated damage to vegetation and soils. Certain environments are more susceptible to OHV damage, including crucial winter ranges, wildlife breeding areas, riparian habitats, and areas with steep slopes or sensitive soils. OHV use will continue into the future; however, the lack of appropriate signage, a shortage of law enforcement personnel, the increase in OHV use throughout the planning area, and a general lack of understanding of land use ethics have increased inappropriate uses of OHVs on federal lands and represent management challenges.

Economic Impact

During the impact analysis phase of this planning process, the economic impact (e.g., jobs, income) resulting from OHV use on BLM and USFS lands will be estimated for a baseline scenario (no action alternative) and management alternatives, assuming that adequate data on current OHV use is available and quantitative changes in OHV use can be estimated based on the management decisions of each alternative. The methodology will be as follows:

1. Obtain quantitative estimates of OHV use on public lands.
2. Estimate the local (within the socioeconomic study area) expenditures of OHV users associated with their OHV visits to public lands. Academic and agency studies and survey data with relevant data will be sought.
3. Multiply use (visits) by expenditures per visit to determine total expenditures.
4. Allocate the total expenditures to the various economic sectors (e.g., lodging, retail, services) to which the various portions of the expenditures accrue.
5. Run these expenditure allocations through the IMPLAN economic impact model to determine direct, indirect, and induced economic impacts.

5.5 NONMARKET VALUES

Market values of BLM and USFS public lands and the federal mineral estate are relatively easy to understand and assess. Commodities produced from use of public lands (such as oil and gas, hard rock minerals, mineral materials, livestock, timber, electricity from renewable energy projects) have a price in the marketplace that can be easily determined. Economic methods are readily available for measuring the flow of income and employment resulting from the production of commodities, e.g., production of electricity from renewable energy projects. A renewable energy development EIS presumes a certain number of wind turbines or solar panels developed over a specified period of time and constructed and operated by a workforce that can be estimated reasonably well. Using economic impact models, economists can then work “upstream” to estimate the purchases that renewable energy developers and operators will make from other firms and work “downstream” to estimate how much their employees’ wages will contribute to other businesses throughout the local economy.

The term *nonmarket values* refers to the benefits individuals attribute to experiences of the environment or uses of natural and cultural resources that do not involve market transactions and therefore lack prices. Examples include the benefits received from wildlife viewing, hiking in a wilderness, or hunting for recreation. Nevertheless, such values are important to consider because they help tell the entire economic story. Estimates of nonmarket values supplement estimates of income generated from commodity uses to

provide a more complete picture of the economic implications of proposed resource management decisions.

Market values associated with the public land uses and values discussed in the sections above will be carefully assessed during the impacts analysis phase of the planning process. Examples include the value of livestock attributable to grazing on BLM lands and the economic impacts of oil and gas development and production. To provide the more complete picture just noted, it is important to also discuss nonmarket values.

To follow the example above, if renewable energy development represents one use, other uses may involve managing for some combination of habitat conservation and recreation. While this scenario may be relatively straightforward from a management standpoint, for determining economic impacts, it is problematic. Herds of elk do not pay user fees to graze on the public lands. Visiting OHV users, fishermen, and hunters may spend money on motels and restaurants, but for the most part recreation on BLM and USFS public lands comes free or at a nominal charge. Thus, much of the value that humans might place on maintaining lands for conservation and recreation is never measured in the market economy. BLM and the USFS are increasingly asked to consider these values, in effect, to replace that “zero” with a more useful number for planning and analysis purposes.⁸

Clearly, it is often useful for BLM and USFS planning purposes to evaluate the market expenditures associated with activities on public lands (e.g., spending by recreationists, mineral development expenditures) or the market value of products taken from public lands such as timber and minerals. Economic models can then be used to estimate the total economic activity that these expenditures or production values generate.

It may also be useful to address the additional nonmarket economic values derived from public lands. In some cases, these values can be calculated if appropriate information is available. In other cases, this is not possible, but it may be helpful to discuss these values qualitatively or to provide examples of these values in analogous situations.

While there are difficulties associated with measurement of nonmarket values, it is well-accepted that the natural and cultural resources of an area and the open space the area may provide can have dollar values. For example, it is common for real estate investors to pay more for view lots or property adjacent to open space or for people to make financial donations to help protect old-growth forests, endangered species, or other sensitive resources.

In examining nonmarket values, economists often distinguish between “use values” and “nonuse values.” *Use value* refers to the benefits an individual derives from some direct experience or activity, such as climbing a spectacular peak, hunting, or wildlife viewing. In contrast, *nonuse value* refers to the utility or psychological benefit some people derive from the existence of some environmental condition that may never be directly experienced: an unspoiled Grand Canyon or the continued presence of an endangered species.

Economists measure nonmarket use values by estimating the “consumer surplus” associated with these activities, which is defined as the maximum dollar amount above any actual payments made that a consumer would be willing to pay to enjoy a good or service. For instance, hikers pay a market price for gasoline used to reach a trail, but pay nothing to use the trail. Any amount that a recreationist would be willing to pay to use this otherwise free resource represents the nonmarket consumer surplus value of that resource to that consumer. There are many techniques for measuring this nonmarket use value. One common way is to collect data on variations in what recreationists do pay (e.g., gasoline, hotels,

⁸ BLM has recently issued guidance on considering nonmarket values: Instruction Memorandum No. 2010-061, Guidance on Estimating Nonmarket Environmental Values, February 16, 2010 (BLM 2010). This discussion draws on that guidance.

restaurants, entry fees, guides or outfitters); economists then use quantitative techniques to impute the additional willingness to pay that constitutes consumer surplus.

Nonmarket use values have been studied extensively for a wide variety of recreation “goods.” To help the reader understand the potential nonmarket value of some of the planning area’s natural and cultural resources, an example of a range of typical nonmarket use values for recreation activities is summarized in Table 5-5, derived from a USFS report, *Updated Outdoor Recreation Use Values on National Forests and Other Public Lands* (Loomis 2005). That study summarizes the findings from 1,239 studies covering much of the nation between 1967 and 2003 and separates out the studies by region. Table 5-5 provides summary statistics for the Intermountain Region in which the socioeconomic study area is situated.

Table 5-5. Average Consumer Surplus Values and Additional Statistics, per Person per Day, Intermountain Region, 1967–2003

Activity	N	Mean	Std. Error	Minimum	Maximum
Camping	21	\$34.72	\$6.64	\$2.03	\$116.66
Cross-Country Skiing	7	\$29.88	\$4.58	\$14.05	\$46.49
Downhill Skiing	3	\$39.62	\$13.88	\$15.05	\$63.11
Fishing	48	\$49.57	\$6.96	\$8.96	\$227.28
Non-motorized Boating	22	\$67.70	\$14.33	\$2.70	\$316.42
General Recreation	12	\$48.46	\$20.92	\$7.91	\$257.51
Hiking	7	\$38.53	\$7.84	\$12.85	\$75.76
Hunting	109	\$48.55	\$3.35	\$2.60	\$169.31
Motorboating	7	\$53.68	\$25.93	\$5.29	\$203.62
Mountain Biking	6	\$184.48	\$41.05	\$65.88	\$295.69
OHV Driving	7	\$22.81	\$4.31	\$7.96	\$40.86
Other Recreation	10	\$56.35	\$17.36	\$12.17	\$206.82
Picnicking	5	\$28.27	\$4.09	\$136.61	\$38.76
Driving for Pleasure	4	\$69.74	\$33.23	\$26.41	\$167.24
Rock Climbing	3	\$50.45	\$7.58	\$35.78	\$61.14
Sightseeing	11	\$23.58	\$8.65	\$0.65	\$100.73
Snowmobiling	8	\$36.29	\$13.24	\$10.79	\$124.44
Swimming	1	\$29.54	N/A	\$29.54	\$29.54
Waterskiing	2	\$56.96	\$13.09	\$43.87	\$70.07
Wildlife Viewing	61	\$37.24	\$3.30	\$5.26	\$193.91
All Wilderness Activities	32	\$41.68	N/A	N/A	N/A

N: Number of studies measuring specific recreation activity.

N/A: Not available.

Mean: Average (arithmetic mean) consumer surplus per visitor day for that activity.

Std. Error: Standard error of the mean, with larger values relative to the mean indicating larger response variability.

Minimum: Average minimum consumer surplus per visitor day for that activity.

Maximum: Average maximum consumer surplus per visitor day for that activity.

Source: Loomis 2005, Table 3. All dollar figures are in 2004 dollars.

By applying the range of values in Table 5-5 to recreational usage figures (visitor days) or a range from specific individual studies that are most comparable to the planning area, an estimate of the recreation-related nonmarket use value, the consumer surplus, can be derived for the planning area. The resulting figure represents the total nonmarket use value recreationists derive from these activities, or alternatively,

can be seen as the total additional amount recreationists would likely be willing to pay for the related recreation activities if a fee for participation were required. Those who are accustomed to free access and use of public land tend to forget that it represents a recreation opportunity and experience for which many would be willing to pay.⁹ This type of calculation must be done very carefully, with great attention to the reliability of the recreational usage numbers and the validity of the consumer surplus values derived from the literature. The results must also be carefully interpreted, as consumer surplus estimates are not directly comparable to estimates of income derived from commodity uses (BLM 2010). Nonmarket use value calculations will be considered for relevancy in the economic impact analysis phase of the RMP revision process and undertaken if useful to decision making and if possible with available data.

With respect to nonuse values, economists differentiate various types, including option values and existence values. Option value represents the benefits from having natural or cultural resources available for future use, while existence value reflects the benefits derived from knowing these resources simply exist. Evidence for the existence of these nonuse values is ample. Local, state, and national taxpayers support a large variety of conservation and protection programs (e.g., National Park Service, state parks, local parks and parkways, open space initiatives) through their tax dollars—programs that are very popular but support many resources that many taxpayers will never visit. A large number of nonprofits are devoted to a wide variety of conservation and wildlife-related causes; many if not most donors to these groups derive no direct benefit from their contributions. Based on Internal Revenue Service filings, Giving USA reported that charitable contributions by individuals, foundations, and corporations totaled \$298.42 billion in 2011, of which \$7.81 billion went to the “environment/animals” sector (Giving USA 2012). Examples of individual organizations with substantial contributions include the World Wildlife Fund (WWF) with over \$221 million in contributions from all sources in 2009 (WWF 2009). The Nature Conservancy (TNC), with over 1,000,000 members, primarily in the United States, received over \$665 million in contributions (TNC 2009). While this generalized evidence of nonuse values is clear, estimating nonuse values for specific resources is difficult and often controversial. BLM guidance recommends that use values be emphasized rather than nonuse values (BLM 2010).

Nonmarket values of open space and well-managed natural resources also include a broad range of human benefits resulting from healthy ecosystem conditions and functions. These benefits include potable water from groundwater recharge, flood control from intact wetlands, and carbon sequestration from healthy forests and certain agricultural lands. These human benefits from ecosystems are known as “ecosystem services” (Ruhl et al. 2007). Ecosystem services are receiving increasing attention from economists. As with the nonmarket values discussed above, there are many techniques available for estimating the dollar value of these ecosystem services.¹⁰ It may be useful in the planning process to further consider the economic value of maintaining or improving the functional benefits of ecosystems.

⁹ This observation is not meant to suggest that such fees should be charged. There are many philosophical and practical issues associated with charging fees for recreational use of public land.

¹⁰ The ecosystem services framework actually encompasses the amenity, recreational, and other values discussed above. For purposes of this brief discussion, the emphasis is on the additional functional benefits ecosystems provide.

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APPENDIX A DEFINITIONS OF LABOR AND NONLABOR INCOME

These definitions are taken from a BEA website (BEA 2010b).

Personal Income – Income received from all sources, including income received from participation in production, as well as from government and business transfer payments. It is the sum of compensation of employees (received), supplements to wages and salaries, proprietors' income with inventory valuation adjustment and capital consumption adjustment (CCAdj), rental income of persons with CCAdj, personal income receipts on assets, and personal current transfer receipts, less contributions for government social insurance.

Labor Income

Net Earnings – Net earnings by place of residence is earnings by place of work less contributions for government social insurance, plus an adjustment to convert earnings by place of work to a place of residence basis. Earnings by place of work is the sum of wage and salary disbursements, supplements to wages and salaries, and proprietors' income.

Nonlabor Income

Dividends, Interest, and Rent – Personal dividend income, personal interest income, and rental income of persons with CCAdj, sometimes referred to as “investment income” or “property income.”

Dividends: This component of personal income consists of the payments in cash or other assets, excluding the corporation's own stock, made by corporations located in the United States or abroad to persons who are U.S. residents. It excludes that portion of dividends paid by regulated investment companies (mutual funds) related to capital gains distributions.

Interest: This component of personal income is the interest income (monetary and imputed) of persons from all sources.

Rent: Rental income is the net income of persons from the rental of real property except for the income of persons primarily engaged in the real estate business; the imputed net rental income of the owner-occupants of nonfarm dwellings; and the royalties received from patents, copyrights, and the right to natural resources.

Personal Current Transfer Receipts – This component of personal income is payments to persons for which no current services are performed. It consists of payments to individuals and to nonprofit institutions by federal, state, and local governments and by businesses. Government payments to individuals includes retirement and disability insurance benefits, medical benefits (mainly Medicare and Medicaid), income maintenance benefits, unemployment insurance compensation, veterans' benefits, and federal education and training assistance. Government payments to nonprofit institutions exclude payments by the federal government for work under research and development contracts. Business payments to persons consist primarily of liability payments for personal injury and of corporate gifts to nonprofit institutions.

Income Maintenance – Income maintenance payments consists largely of supplemental security income payments, family assistance, food stamp payments, and other assistance payments, including general assistance.

Unemployment Insurance Compensation – Unemployment insurance compensation includes state unemployment compensation, unemployment compensation of federal civilian employees, unemployment compensation of railroad employees, unemployment

1 compensation of veterans, and trade adjustment allowances to workers who are unemployed
2 because of adverse economic effects of international trade arrangements.

3 *Retirement and Other* – Retirement and other consists of retirement and disability insurance
4 benefit payments, medical benefits, veterans benefit payments, federal education and training
5 benefits, other government payments to individuals, government payments to nonprofit
6 institutions, and business payments. However, disbursements received from private
7 retirement programs (e.g., from 401k accounts) are not included. The Bureau of Economic
8 Analysis Regional Economic Information System data does not currently capture this source
9 of income, which is an important source of income in counties with substantial populations of
10 retired persons.
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